



APRIL, 1908.

\$3.00 per Annum.
Foreign, \$3.60.
Canada, \$3.25.
Single Copies, 25 Cents.

AMERICAN VETERINARY REVIEW

EDITED BY

Prof. A. LIAUTARD, M.D., V.M.,

Member Central Society of Veterinary Medicine (Paris). Honorary Fellow Royal College of Veterinary Surgeons (England). Foreign Corresponding Member Academy of Medicine, Bruxelles (Belgique).

AND

Prof. ROBERT W. ELLIS, D.V.S.

WM. HERBERT LOWE, D. V. S., Associate Editor.

WITH THE COLLABORATION OF

- | | |
|---|--|
| Prof. W. J. COATES, M.D., D.V.S., New York American Veterinary College. | D. ARTHUR HUGHES, Ph. D., D. V. M., Inspector Commissary Dept., U. S. Army, 4193 S. Halsted St., Chicago, Ill. |
| Prof. O. SCHWARZKOPF, D. V. M., U. S. Army, Fort Sam Houston, Texas. | Prof. LEONARD PEARSON, Dean Vet. Dept., University of Penn., etc., Philadelphia, Pa. |
| Prof. W. L. WILLIAMS, V. S., New York State Veterinary College, Ithaca, N. Y. | L. A. MERRILLAT, V. S., Chicago Veterinary College, Chicago, Ill. |
| Prof. S. STEWART, Kansas City Veterinary College, Kansas City, Mo. | D. E. SALMON, D. V. M., University of Montevideo, Uruguay. |
| M. H. MCKILLIP, M.D., V.S., of McKillip Veterinary College, Chicago, Ill. | Prof. VERANUS A. MOORE, New York State Veterinary College, Ithaca, N. Y. |
| F. C. GRENSIDE, V. S., Pres't V. M. A., New York City | RICHARD P. LYMAN (Harvard), Sec'y A. V. M. A., Hartford, Conn. |
| Prof. M. H. REYNOLDS, University of Minnesota, St. Anthony Park, Minn. | C. J. MARSHALL, V. M. D., Sec. Pa. S. V. M. A., Philadelphia, Pa. |
| WM. H. DALRYMPLE, M. R. C. V. S., President A. V. M. A., Baton Rouge, La. | |

And several others.

CONTENTS.

	PAGE		PAGE
Editorial—		Obituary	75
European Chronicles.....	1	Society Meetings—	
Veterinary Co-operation Appreciated.....	12	Iowa State Veterinary Association.....	78
Original Articles—		Michigan State Veterinary Medical Association.....	90
Veterinary Missionary Work in the West and South	15	Indiana State Veterinary Association.....	100
Artificial Impregnation of Domestic Animals	30	Schuylkill Valley Veterinary Medical Association.....	103
One Problem in Meat Hygiene.....	42	Veterinary Medical Association of New York City.....	109
Reports of Cases—		Minnesota Live Stock Breeders' Association.....	111
Parturient Paresis in a Mare—Recovery..	48	Veterinary Association of the District of Columbia.....	113
Fatal Impaction of the Placenta in the Reticulum of a Cow.....	49	Maryland State Veterinary Medical Society.....	113
Traumatic Pericarditis.....	50	News and Items.....	115
Another Case of Persistent Lactation in a Mule	52	Veterinary Medical Association Meetings.....	117
Recent Data in Veterinary Science..	53	Publishers' Department.....	118
Abstracts from Exchanges—			
English Review.....	58		
French Review.....	60		
Italian Review.....	64		
German Review	67		

The AMERICAN VETERINARY REVIEW is issued on the 1st of each month. Manuscript and copy for insertion should be received by the 15th of the preceding month to insure insertion in the next month's number. Volume commences April and October.

Communications relating to publication, subscriptions, advertisements and remittances should be addressed to

AMERICAN VETERINARY REVIEW,
509 West 152d Street, New York, N. Y.

European Exchanges, books for review and personal letters should be addressed to
A. LIAUTARD, M.D., V.M., 14 Avenue de l'Opera, Paris, France.

Entered at the Post Office at New York as Second-Class Matter.

NITRO-OXIDATION

BISMO-NITROX

for the immediate correction of gastric flatulent conditions generally described as Acute Gastric Colic. Relief usually within the hour at cost to Veterinarian of 12½ cents. AS RELIABLE AS THE DIAGNOSIS.

NITR-O-SALT

for the speedy cure of all curable fistulous, stubborn, slow-healing, virulent and septic conditions by local treatment. FOR THE WOUND OR SORE THAT HAS NOT HEALED.

NITROX (Veterinary)

for intravenous injection. Corrects septic conditions of the blood, and attendant abnormal temperature in pneumonia, anasarca, septicaemia, catarrhal fever and similar disorders. FOR THE CRITICAL CASE.

Send for new descriptive literature and testimonials of representative Veterinarians in active practice.

Those who have never tried our products, write for special trial offers.

PRICES:

Bismo-Nitrox and Nitr-O-Salt to Veterinarians, \$2.00 each per lb.; Nitrox (Veterinary) \$3.25 per ½ lb.; \$6.00 per lb., express extra.

NITROX CHEMICAL CO.

511 N. Garrison Avenue, ST. LOUIS, MO.

A

=

m
w
re

ag

de
of
a
an
st

al
re
Th
of
un
in
ca
ne
se

AMERICAN VETERINARY REVIEW.

APRIL, 1908.

EDITORIAL.

EUROPEAN CHRONICLES.

PARIS, February 15, 1908.

HYPERÆMIA STASIS AS A THERAPEUTIC AGENT.—The numerous extracts that I find in the contemporaries that I receive will serve me in reviewing Bier's method, of which I have already spoken and that I have promised to present to our readers.

It has for object the use of hyperæmia stasis as therapeutic agent.

Hyperæmia is one of the means that organism possesses to defend itself against morbid conditions. Indeed, every time one of our organs is threatened by a pathogenous agent, for instance, a rush of blood, a true congestion, takes place in that region, and Bier claims that this natural process must be assisted, instead of trying to prevent it.

Truly speaking, a long time before Bier, hyperæmia had already been used in therapeutics. Ambrose Pare, and more recently towards the end of the last century, Dumreich, Bruns, Thomas, Helferich and others, promoted the passive hyperæmia of extremities in the treatment of fractures and to accelerate the union and formation of callus. In our days, massage, blistering, frictions, actual cauterization most probably owe their efficacy to the congestion that follows their application; but it is nevertheless certain that it is, thanks to the methodical researches, made since a long time, and specially to the results

that he has obtained in the treatment of many various diseases that Bier has the right to give his name to this method; which, it appears, is bound to become a great success.

Since 1892, when Bier published the first results he had obtained the method has assumed a very great and wide importance. In Switzerland, in Germany especially, it is now finding its application in France, and in all appearance in no long time it will receive the practical sanction announced by Prof. Kuster at the 35th Congress of the Surgical German Society, namely, that "*Bier's method was the greatest progress made by surgical therapeutics since the discovery of Lister.*"

As I have already indicated in my previous notices, Bier recognizes two kinds of hyperæmia, the active and the passive. (a) The former, due to the acceleration of the arterial circulation, may be promoted by frictions, massages, electric currents, chemical irritants, warm compresses, etc., but especially with air heated to high temperature. While moist heat cannot go beyond 50° at most, without attacking the vitality of tissues, by his experiments made on himself and on animals, Bier has found that some parts of the body (the extremities, for instance) can, without danger, and with a length of time sufficient to obtain good results, support temperature superior to 100°. Active congestion is at its height between 80° and 100°, with higher temperatures it diminishes.

(b) Passive hyperæmia is obtained in two ways, with an elastic band or with cupping glasses. The bands are made of very supple rubber of various lengths and widths (ordinarily 5 to 10 centimeters), according to the region they are to be applied. The technic is very simple, and yet it demands attention to avoid the possibility of local gangrene. They are simply rolled round the region, and after several turns sufficiently to cover it entirely, they are secured with safety pins. The only difficulty consists in the regulation of the degree of compression to be applied and which must be sufficient to promote hyperæmia, without cutting entirely the circulation. According to cases, a slight congestion must be obtained; in others, one greater, and

again in others quite a strong one. Practice will teach the surgeon. Of course, if the band is too tight it must be taken off. At any rate, a marked cedema must be obtained. The band must never be applied directly over diseased regions, but always at some distance from the inflamed tissues. The duration of the application varies. In general, between 20 and 22 hours are sufficient. Although this length of time can be divided, the band being taken off for one or two hours and applied again. How long must the treatment last? This is answered by the condition of the parts and whether the trouble is acute or chronic. In this last case the application will have to be resorted to for a long time.

When the region does not allow the use of the band, cupping can be resorted to with great advantage, and similar results obtained.

The principal effects resulting from hyperæmia are the following:

1. Analgesia. Whether hyperæmia is active or passive, the first consequence of its application is an undoubted diminution of the pains. If this result is not obtained rapidly it is a proof that the method is badly applied. Bier admits that pain is due to the actions of nocive elements upon the extremities of the nerves, which in active hyperæmia, are rapidly carried away in the general circulation and in passive hyperæmia are diluted in the cedema which gathers in the portion submitted to the stasis.

2. Bactericidal action. This is most certain and has been demonstrated by the experiments of Notzel, who inoculated 67 rabbits with mortal cultures of bacterias of anthrax or of streptococci and then afterwards applied a stasic hyperæmia on the inoculated regions and had 51 recoveries. Even *in vitro* the blood from a compressed leg is seen to be more bactericidal than the serum obtained from normal blood. This bactericidal action is explained in various ways. For Hamburger, it is due to the great abundance of carbonic acid in the blood. For Leyden, Lazarus, Buchner, Vicherra, the bactericidal power of the blood is due specially to the greater number of leucocytes gathered in

the hyperæmic zone. For Bier, the question is more complicated and the protecting action is due partly to the above-mentioned facts, but also, no doubt, to other factors that are still unknown.

3. Resorption. Passive congestion cannot be resorted to so as to activate the resorption of exudates, but arterial hyperæmia by hot air do it powerfully. Every one knows of the old practice of the application of a ligature followed by suction of the wound, in cases of snake biting. Under the influence of the stasis of the blood, toxic elements can be destroyed, even at the point of inoculation, as Czynhoz and Donath have proved it.

4. Nutrition. Hyperæmia promotes nutrition and repair of tissues as is observed for bony growth. Hence its application to assist the formation of callus in fractures. It has also a resorbing action on blood clots, and if it modifies the general nutrition it is by giving rise to leucocytosis.

The application of this method, although finding its indications in all inflammatory diseases is, however, so far restricted to only a limited number of cases. For instances, in human medicine it has given advantageous results; in chronic articular rheumatisms, traumatic articular stiffness; in the treatment of scoliosis when combined with gymnastic exercises; in recent fractures, sprains, serious or bloody articular swellings; in neuralgia, elephantiasis, and in the treatment of varicose ulcerations. In these various affections active hyperæmia by hot air was resorted to.

Passive hyperæmia answer better specially in microbial diseases, in tubercular arthritis, in acute suppurations of the extremities, in traumas by accidents or from operations when the cicatrization is interfered with by infection, in tendonitis, or extensive traumatisms, in fractures, acute arthritis, mastoiditis, acute otitis, orchitis and mammitis.

In veterinary medicine, the attempts are few. In Germany, Walther has used cupping successfully in three cases of parenchymatous mammitis in cows. Sturham has treated two cases of diffused inflammation of the extremities following bruises. Kunnemann has used the elastic band in the treatment of some

affect
sever
dinou
foot,
of de
purat
have
thriti
are re

In
canno
deserv
mation
mittel
of it,
howev
some
medici
ess of
articul
dinous
results
the ho

SP
veterin
or pse
some f
manife
logical
scribed
uteri.

The
human,
do not
and hy
physom

affections of the extremities in dogs. Schmidt has published several cases of recoveries of phlegmonous inflammation of tendinous sheaths, abscess of the fetlock, punctured wound of the foot, quittor, etc., etc. Parent has used it in France in a case of deep and anfractuous wound of the knee and in one of suppurating wound of the hock. Recently Lemire and Ducrotoy have recorded the results they have obtained in traumatic arthritis, in traumatic synovitis, and in one of phlebitis. These are reported in the REVIEW.

In thus passing rapidly a general review of this method, I cannot be expected to go as extensively into it as its importance deserves, and I must refer those who desire more minute information to the original German work, "*Hyperæmia als Heilmittel*," by Prof. Bier, to the translations that have been made of it, or to the medical journals which have spoken of it. I may, however, resume and conclude in saying: While there may be some great difficulties in applying the hyperæmic method in our medicine, there is no doubt that it is actually a therapeutic process of great importance and efficacy. It deserves to be tried in articular infections, suppurative lesions of the digital region, tendinous quittor and other similar conditions. And the excellent results obtained in many cases in human medicine will justify the hopes of great expectations in veterinary practice.

SPURIOUS OR PSEUDO GESTATION.—Classical authors on veterinary obstetrics speak, under the name of spurious, false or pseudo gestation, for a series of manifestations presented by some females, which simulate more or less normal pregnancy; manifestations, however, which are but those of special pathological productions, and among the principal of which are described the moles, the uterine cysts and hydrometra or hydrops uteri.

These peculiar conditions are also sometimes observed in the human, and in their etiology are mentioned causes which we do not find in our animals, namely, the change of life, dyspepsia and hysteria. And then again ovarian diseases, uterine tumors, physometra, abdominal plethora, obesity, etc., etc. But there is

also a peculiar form that occurs in woman, which is designated and described as pseudocyesis, and that by the authority of most writers on the subject, has not been observed in animals.

In the human, the diagnosis is in the generality, a matter of much difficulty, at least in the first months of the trouble, although even then there is something unusual in the symptoms, some essentials being wanting or also because of their appearing at one period of pregnancy when they belong to another.

Every obstetrician of some experience has no doubt met with those cases of so-called nervous gestation, and in some instances may have met with the annoyances that they gave him, until the time of the return to general health of his patient, had shown her, how great an error it was for her to insist on her being pregnant.

A case has just been published in the *Revue Générale de Médecine Vétérinaire* which is very interesting, and comes, I believe, to add an important fact in the history of veterinary obstetrics. A case of Pseudo Gestation, of pseudocyesis in a slut, reported by the owner. A veterinarian and an interested observer relates this valuable information. False gestation of similar nature might be detected in large animals. In them the examination would certainly reveal the correct state of affairs. But in small animals it might not be so easy a matter, and the event might bring to a careless observer lots of ridicule. Here is the case :

Mr. Augustin, an army veterinarian, has a thoroughbred fox-terrier, seven years old, quick and active, traveling 20 or 25 kilometers, following his carriage or his horse when he goes riding; she makes jumps one meter high. This is her general condition. In February, 1906, she had a litter of five healthy and well-formed pups. In July of the same year she was covered, but did not come to term and aborted. In December, 1906, she again had four handsome pups, and in the following May she became in heat, but was not served.

"Now," writes the author, "one week after being in heat, she appears dull and tired. This appearance increases gradually.

When promenading, instead of running to and fro quickly, as usual, she remains behind. Several times she refuses to go with her master when he goes riding. Her health, however, remains good, and, taking in consideration her lazy aspect and constant sleepy appearance, the owner demands to himself if, after all, and notwithstanding his careful watching of her when she was in heat, the slut may not have been covered without his knowing it? These fears are soon increased, when he sees the slut getting stout, putting on flesh and losing her fine shape, which, notwithstanding many gestations, she has kept. The owner was much perplexed and joked by his friends for not being able to say whether the dog was in pups or not. And with all the external indications, only negative results had been obtained in exploring repeatedly the abdomen, making rectal examination and auscultating. At the end of six weeks the slut had a marked pendulant abdomen; she has lost a little flesh, but seems more tired and lazy. She has the heavy and one-sided walk of pregnant females.

At seven weeks the mammæ began to swell; in their tissue are felt little hard masses; the teats are developed and from them big drops of milk are squeezed by pressure. Evidently parturition was threatening. The poor dog herself expected something of that nature, no doubt, as she remained home two days, lying down, refusing to go out, restless, scratching her bedding, laying down carefully, licking her vulva—which had remained normal—and licking also her mammæ, which are red, warm and very painful.

Great surprise! Nothing occurred! No delivery, no expulsion of dead foetus! Absolutely nothing. She had no swelling of the vulva, no vaginal discharge.

Forty-eight hours after the slut had resumed all her vivacity, she is gay and alert as before. A purge, an astringent coating over the mammæ, and after a few days nothing remained of the false alarm she had given to her owner.

The case is very instructive, but certainly while the appearances of the slut were positive, the sure and physiological signs were missing, and they are the ones to be depended upon.

Was it a case of "Nervous Gestation."

ECHINORHYNCHUS GIGAS (*Gigantorhynchus Gigas*).—The part played by Helminthes in the etiology of infectious diseases has in recent date called the attention of investigators in many laboratories. MM. Weinberg and Romanowitch among them, have already made known some of the facts which they have observed in man and in animals, showing that helminthes may act as important factors in the etiology, either in inoculating pathogeneus agents or in promoting their entrance through the intestinal walls of their hosts. They have made known lately in the *Annales de l'Institut Pasteur* interesting facts which relate to some lesions that they have found in swine, lesions which were due to the *Echinorhynchus Gigas* (*Gigantorhynchus Gigas*), of which they give a description with illustrations that I reproduce here from the journal where they have been published.

There is no doubt that this intestinal parasite, with the large number of hooks that he has on his buccal rostrum, may occasion extensive lesions of the intestine, to which they adhere very firmly. They have been mentioned as having perforated the intestinal walls and having passed in the abdominal cavity. In the present cases, they were found in the small portion of the small intestine, sometimes so closed together and in such a number that they would obstruct the intestinal canal considerably. At the point of their attachment the mucous membrane forms a little projecting elevation, sometimes red and congested. On the peritoneal surface of the small intestine they leave small nodosities, which correspond to the points where they were attached. These are generally found on the border of the intestines and sometimes on the edges of the fat of the mesentery. The writers have not found any perforation of the intestinal canal.

The histological study of the lesions is very interesting and shows a loss of substance due to the mechanical action of the

num
a, a'
E
Echin
paras

the
thic

parasite, which, pushing its rostrum in the walls of the small intestine, destroys, first, the mucous membrane, penetrates then in

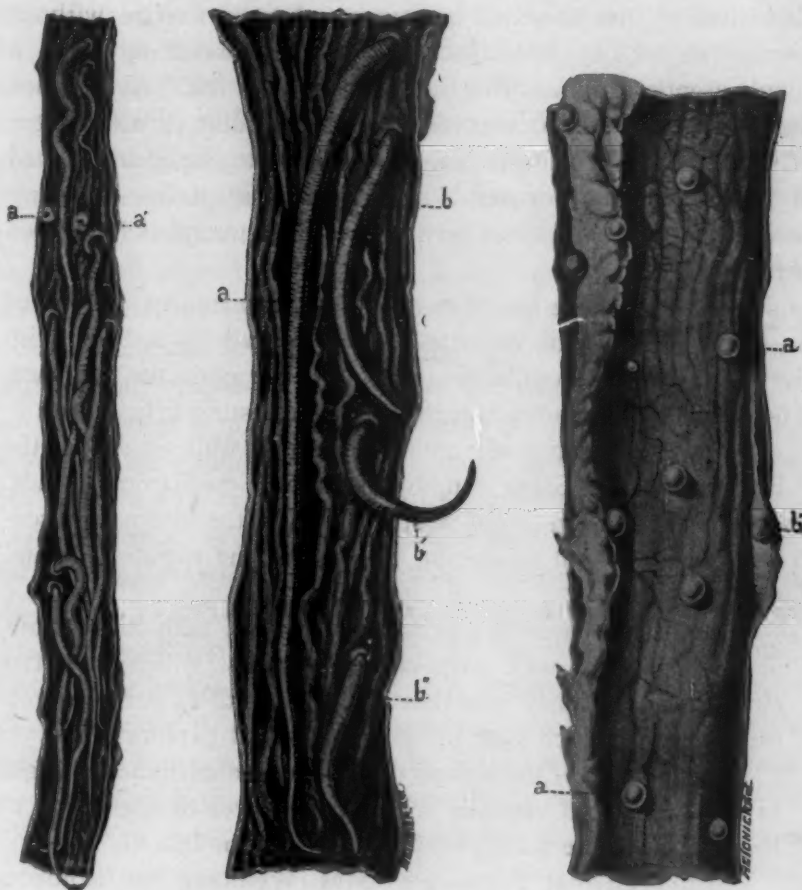


FIG. 1.

FIG. 2.

FIG. 3.

Fig. 1—*Echinorhynchus Gigas*, attached on the wall of the small intestine of pigs. Their number, in this case, was such that the diameter of the organ was considerably reduced. *a, a'* Deep ulcerations made by the parasite. These are surrounded by a projecting ridge.

Fig. 2—*a*. Female. *a, b, b'* Males.

Fig. 3—Peritoneal surface of a position of the small intestine upon which are attached *Echinorhynchus Gigas*. At *a, a'*, nodosities corresponding at the points of attachment of the parasite. *b*, a nodule projecting through the fat of the mesentery.

the submucous, which is generally destroyed also all through its thickness, and finally it sometimes attacks the internal muscular

coat. But this last condition may be found and have taken place without the presence of the slightest inflammatory infiltration. At any rate, it is certain that the *Echinorhynchus Gigas* can implant itself on the intestinal mucous membrane of swine without giving rise to any other lesions than those resulting from a simple aseptic trauma. But this is not always the case, as when the contents of the nodules, formed at the point of attachment of the parasite, have been examined bacteriologically and sowed in glycosed media for aerobic and anaerobic germs, in many cases cultures of one or of several species of microbes have been obtained.

The writers have also found, in several instances, lesions of an infectious necrotic enteritis, which existed on a level with the inflammatory nodule projecting on the peritoneal surface. The conclusions presented in this very interesting article are:

"1. In attaching itself on the intestinal wall of swine, the *Echinorhynchus Gigas* can, by essentially mechanical means, "destroy the mucous, sub-mucous, and even the internal muscular layers, without producing round him the slightest inflammatory lesion.

"2. In some cases this parasite inoculates, with its rostrum, "in the intestinal wall pathogeneus agents, which give rise "either to an ordinary infectious enteritis or to an acute necrotic enteritis, which may bring on intestinal perforation.

"3. The study of the lesions due to the *Echinorhynchus Gigas* "brings a new and valuable argument in favor of the action of "helminthes in the etiology of some infectious lesions."

The interest that this note of MM. Weinberg and Romanowitch carries with itself certainly will not escape the attention of our readers and of pathologists, adding as it does a very valuable information concerning the action of helminthes in the pathogeny of infectious diseases.

BIBLIOGRAPHIC NOTICES.—Among the material for my bibliographic notices of this month stands, first of all, the first volume of the second edition of *Cadeac Encyclopedia*, "*Pathologie Interne*," which has just been issued by J. B. Bailliere & Sons.

It is but ten years since the first edition made its appearance, and, as it is exhausted, the second is presented with many changes or rather improvements, which increase its value as a work and will continue the successful career of the first. The plan of the work is somewhat modified, and now two distinct pathologies will be issued, namely, internal and surgical pathology. In the preface, Prof. Cadeac says that as a consequence of this subdivision, every part which truly belongs to the second will be separated from the place it occupied with the first in the former edition, and by this plan all the various chapters shall be methodically exposed and be better developed according to their importance. This new arrangement has besides allowed the introduction of new articles, which had been heretofore left aside or treated in other parts of the encyclopedia, such as the chronic indigestion of bovines, cancer of the stomach in our domestic animals, etc., etc. However, adds the able author, without denouncing any of the general views of the first edition of my internal pathology, which have been much strengthened as time went by, I have felt the necessity of presenting some details in a different manner, in touching over and rebuilding over all the chapters and giving to this new work a more didactic and no less documentary form." The preface is closed by a call which is applicable to veterinarians all over the world: "Clinicians and practitioners, publish all that experience has taught you," as by these publications only can the truth concerning diseases of animals be arrived at.

The new first volume treats successively, in the different species, of the diseases of the mouth and its annexes, then those of the pharynx, œsophagus and of the stomach; therefore, considering the varieties of stomatitis, parotiditis, maxillitis, the acute and chronic pharyngitis, the paralysies and parasites of the pharynx, œsophagitis, œsophagism, troubles of the stomach, of the rumen, the reticulum, of the omasum and finally of all the various forms of gastritis, dilatation and torsion, cancer parasites and tumors.

The volume forms a book of over 500 pages and is illustrated with 136 plates, more than double the number presented in the original work.

Among the sundries communication that I have received are: The preliminary announcement of the International Congress of Tuberculosis, to which I will have opportunity to allude again; a number of official documents relating to sanitary organization in Pennsylvania, in which very interesting facts are presented, and for which I have to thank my friend, Dr. L. Pearson; and then the McKillip Veterinary College Alumni Association Journal for January; the Chicago Veterinary College Quarterly Bulletin; and the program of the last meeting of the Ohio State Veterinary Medical Association, sent by Dr. W. H. Gribble, and in which I see announced a number of papers which, judging by their title, must be quite interesting and which I hope will find their way in our journal.

A. L.

VETERINARY CO-OPERATION APPRECIATED.

We do not believe that the veterinarian has done his whole duty to the farmer when he limits his services to the giving to his sick animals the very best possible professional treatment that he is capable of rendering. This, of course, should be appreciated at its full value, and we would not be understood as discounting in the least the necessity and importance of this class of work, but at the same time we cannot help thinking how much more the veterinarian owes to his client than the treatment of sick animals when called upon for his professional services.

The intelligent and capable veterinarian, by reason of his special training and knowledge, should be of incalculable assistance to the stockman and dairyman in advising him as to sanitary requirements in the construction of buildings and in aiding him to apply the principles of veterinary science to the breeding, development and maintenance of live stock under conditions as

would prevent, so far as possible, the occurrence of infectious and dangerous diseases to which domesticated animals are subject.

Veterinary science has to do largely with agricultural problems, and the veterinarian as well as veterinary organizations should get into closer and more helpful relations with live stock interests, particularly in the matter of the control of infectious and preventable diseases, and in the work for the improvement of live stock. Veterinarians should take part and co-operate with the farmer in his efforts to build up the live stock and dairy interests.

Where veterinarians and veterinary organizations have been careless and neglected the farmer's welfare in the respect alluded to, we see veterinary progress come to a standstill; but, on the other hand, where there is a friendly co-operation the business of the farmer has benefited and the veterinary profession has been recognized and advanced as a consequence. The veterinarian must not lose sight of the fact that there are mutual relations which he cannot afford to be careless about or neglect.

For years the REVIEW has advocated a closer and stronger bond of sympathy and confidence between the farmer and the veterinarian. Where this has existed and the veterinarian has attended and taken part in the meetings of the farmer, stockman, breeder and dairyman, the result has been most beneficial and gratifying to all concerned; but where each has worked independently the results have not been so successful or satisfactory to either.

A good illustration of what an intelligent application of veterinary science to agricultural interests will accomplish, and how much it is appreciated by stockmen and others, is found in the state of Minnesota, where the veterinarian and the farmer work hand in hand. In the March REVIEW we recorded the fact that the Minnesota State Veterinary Association had been recognized and admitted to membership in the State Agricultural Society, being given the same representation as the State Breeders' Association and other similar state organizations.

It is our pleasure this month to give space under "Society Meetings" to a number of resolutions recently adopted by the State Breeders' Association of Minnesota because they demonstrate the truth of our conviction. This association not only endorses the work of the veterinary profession of that state, but gives a full expression of a grateful appreciation of the benefits that have already been wrought in the interest of agriculture and animal husbandry in the great Northwest.

ANOTHER REASON.—The busy man stopped before an office building and leaped from his carriage. At the same moment an ambitious urchin ran forward and piped:

"Hey, mister, kin I hold yer horse?"

"No, you can't!" snapped the busy man.

"Won't charge y' much," insisted the urchin.

"I don't care about the charge," impatiently responded the man, throwing a blanket over his bony steed. "My horse will not run away."

"Gee, mister, I didn't think he'd run away!"

"No?"

"No, I thought he might fall down."—(*Harper's Monthly.*)

ODD ANIMALS IN HARNESS.—The horse must look to his laurels, as a number of odd competitors for his place as the friend of man are springing up. At Anaheim, a German settlement in Southern California, ostriches have been trained to draw light four-wheeled traps. One of these birds so harnessed has travelled a mile in three minutes, or at the rate of twenty miles an hour. The African zebra was formerly regarded as being too wild and vicious to be of use in harness. But time has changed this, and now in British East Africa any number of zebras can be purchased ready trained to bit and bridle. The zebra will be found most useful in Africa and India, as it is exceedingly strong, a fast trotter and immune from many diseases which attack horses. Perhaps the oddest animal in harness is the wild boar, which is driven by a French peasant at Montlucon. It is now three years old and is able to draw a small two-wheeled cart. As a bit is of no use, the reins are attached to the animal's eye teeth.

VET

C
asso
read
of p
souls
Sout
This
educ
and c

It
to be
be w
that i
veteri
the "
fession
as a
fession
know
standi
is quit
the su
ister t
inarian
both a

ORIGINAL ARTICLES.

VETERINARY MISSIONARY WORK IN THE WEST AND SOUTH.

BY MARK WHITE, V. M. D. (U. OF PA.), DENVER, COLORADO.

Read before the Colorado Veterinary Medical Association, Jan. 2, 1908.

Of all subjects that are usually discussed before veterinary associations on occasions such as this, I do not recall an article read or published on the text selected for this paper. We hear of people going to China and other heathen countries to save souls, but we never hear of veterinarians going to the West and South to save people and animals from ill-health and death. This is largely due to the fact that the people have not been educated to the knowledge that our science is in fact a science and one of good worth.

It is time, then, that the public should be taught that in order to be qualified for this work the veterinarian must first of all be well educated in one of our recognized veterinary schools; that it requires fully as much training and study to qualify in veterinary medicine as in the study of the human system; that the "old horse doctor" no longer is a representative of the profession, and must not be taken as an example of the class, or as a type of a qualified veterinarian; that the veterinary profession has produced the greatest scientist the world has ever known; that an educated veterinarian is entitled to equal social standing with other professional men, none excepted; that it is quite as noble—and perhaps more noble—to be able to relieve the suffering dumb animal that cannot help itself than to minister to human beings; that the world needs scientific veterinarians as well as physicians to protect the lives and health of both animals and humans. Also to inform the public that the

"hoss doctor" type is non-educated, non-recognized, non-qualified, non-licensed, and well earns the title, "Quack," "Faker" and "Impostor"—or, in other words, are "undesirable citizens." Also that the non-graduate not only does not raise the standard of the veterinary profession, but that he retards greatly the advancement of our profession. That the graduated veterinarian should be legally protected so that the non-graduate is prohibited from assuming a title or degree to which he has not a just claim. That no country or municipality is well protected or safe against disease without the aid of the veterinarian. That every State should have a State Veterinarian and a corps of able assistants. That every city should have scientific veterinarians to protect the citizens from the eating of unwholesome food.

Most of you are doubtless familiar with the good and well-meaning citizen who approaches you about like this: "Are you Doc. (or Doctor) Blank?" You answer in the affirmative, and he continues:

"Do you doctor horses or cows? Do you doctor dogs? Do you know anything about cats? What will you charge to cure this spavin on my horse? Do you have a remedy for this disease?"—naming some ailment with a view to buying a bottle or box, provided he can get it for fifty cents or one dollar, never thinking that you have a charge for services.

The majority of callers to my office are not in pursuit of veterinary services, but want to purchase some specific remedy for disease. This method of dealing with skilled veterinarians is due to the fact that the public has been in the habit of dealing with the old time "hoss doctor" and so does not know how to approach the educated veterinarian, and does not view him as a professional man who is to be paid for skilled knowledge and not for medicine as if he was a dealer in patent medicines. May the time not be far distant when the public will come to know and appreciate fully all the veterinary profession has to give to humanity, through its thousand of representatives. That day is rapidly coming and it is our duty to unite and hasten its arrival.

Frequently you are introduced to a horseman as Doctor Blank, the veterinarian (sometimes your friend will make the mistake and call you Doctor Blank, the "Hoss Doctor"). The new acquaintance will then say, probably smiling in a self-satisfied way, What! a "horse doctor?" Well, well, do you know that I used to be a pretty good "hoss doctor" myself, so was my father before me. Did you ever try gunpowder for black-leg in cattle?" and so on, and so on, ending up by asking me if I had met so and so and so and so, naming every quack in town and calling them all doctors and at the same time saying that they are very good "hoss doctors," too.

Those of you who take a real pride in our profession can guess about what my feelings are about this time, for I am out of patience and wish all the "hoss doctors" were singing with the angels, or that I had not cast my lot with the veterinary profession. It is a state of affairs, don't you think? It appears as though the public cannot appreciate a veterinarian as a man who has been educated for his work, they can only see him as one practicing what he has gathered from individual experience. The public cannot seem to appreciate the fact that the educated veterinarian has acquired his veterinary knowledge from the greatest students in the world. How unreasonable it is for one to believe that a "hoss doctor," with his individual experience, can be as well qualified for his work as the veterinarian who has taken a lengthy university course and received the veterinary experience or knowledge of the entire veterinary medical world. Ridiculous, don't you think? Shall I come to the rescue of the profession and inform my new acquaintance that I do not care to know his other "hoss doctor" friends. And that I do not class myself with them professionally. That I am an educated veterinarian, having served due time at one of our universities, where I graduated, and that I hold a diploma to certify, that I am qualified to care for the diseased animal intelligently? And am I to inform him that his never-failing remedies for diseases are not of interest to me? That I do not

believe that gunpowder will cure black-leg in cattle, or that sweet oil in a horse's ear will cure fistula of the withers?

Whatever your view may be, I believe that under such circumstances it is my solemn duty to my profession to do some missionary work and endeavor to convert my new acquaintance to the fact that this is the day of the educated veterinarian.

It therefore happens that I explain our profession to him, and when I bid my new acquaintance God-speed, I comfort myself with the belief that I had converted him to a full appreciation of a veterinarian's worth to the community as a scientific man.

Such is the daily life of the Western and Southern veterinarian, but unless we all unite in such work by the time we get our clients to appreciate our profession, as we do ourselves, we will be dead or in the insane asylum.

About one year ago I made the statement through the AMERICAN VETERINARY REVIEW that it was my opinion and observation that infectious diseases are more virulent in Colorado than in any other section of America; that wounds are more readily infected and it is more difficult to ward off suppuration or pus formation here than elsewhere. Most bacteria grow more rapidly under good conditions if they are of native growth. That our rarified air is not necessarily an antiseptic, as believed by many. That ptomaines are very prevalent in this altitude. All this is, in my opinion, true, with the exception of the open range country where the sun has full play, or else on newly occupied premises.

I cannot recall to mind a single infectious disease that runs a mild course in this part of the country. As an illustration, take tetanus, a disease that is almost invariably fatal in Colorado but not so much so in the East or South. Take infectious pneumonia, and the same is true with it. Also distemper of the dog; it too runs a more variable course here, developing many complications that do not arise in the East. Then, too, as a rule, distemper is more fatal in Colorado. Ptomain poisoning in the horse, dog and cat is not only more prevalent but fatal.

Some would say that the above statement could not be true because one can take a quarter of mutton or beef and hang it up in the Colorado sun and it will keep indefinitely. This is true of meats simply because the Colorado sun is so intensely penetrating that it readily forms a hard crust covering, which cannot be bored by either flies or bacteria. This same piece of meat would not keep if butchered in Denver and hung up in a building where sunlight could not strike it.

The Colorado sun will no doubt kill or retard bacteria growth if it can get a direct show at them. In the city or country buildings the sun cannot shine upon the bacteria, therefore cannot retard their multiplication.

One would then ask that if this be true why then is tuberculosis retarded in Colorado or high altitudes? My answer is that one coming to high altitudes infected with the Eastern or Southern grown bacilli will almost invariably improve if not entirely recover from the ravages of the infection, provided they come to our state within a reasonable time after he develops the disease.

It is a common belief and is possibly a fact that when a person develops tuberculosis in Colorado that it is more virulent than when contracted in lower altitudes. Why is this the case?

Simply because the tubercle bacilli, as grown in Colorado, mature under better conditions and are stronger. Persons coming to Colorado infected with the low altitude grown bacilli, which must be weaker, almost invariably improve. If they do not get well in the altitudes, because the low altitude grown bacilli is weaker and has not adapted itself to this altitude, therefore must multiply under retarding conditions. Again, the person coming to the high altitudes experiences a great amount of rarified air stimulation. The Colorado climate certainly is a tonic for the invalid person, giving him a greater power of bodily neutralization of infectious toxins, and through the increased health of the individual he gains the power to throw off the invading disease.

One does not need to receive an electric, stimulating treatment in Colorado, because the rarified air keeps the body charged thoroughly with electricity all the time. Incidentally let me suggest that all lazy people settle in Colorado, for our air will put such inspiration and life into the blood that they simply cannot loaf around.

It is my desire to help raise the standard of veterinary medicine in Colorado and the West. I wish to see that the people appreciate the true value of our usefulness to the commonwealth. We must secure the respect and confidence of the medical profession, for we need their co-operation (and they need ours). We must both work hand in hand for the advancement of the medical sciences. The medical profession is ready to receive us and to give us all that for which we justly deserve credit.

I am very anxious to have our office of State Veterinarianship increase in magnitude and importance. A vast amount of work should be done through this office. This association should give its entire support and assistance to our State Veterinarian. He needs and deserves the assistance and co-operation of the entire veterinary association of this state. This office must look after and branch out for new work and not trail in the old rut of the past. In order for the people to appreciate the office they must be made to understand the importance of the office. Bring this before the public in a proper way and the public will immediately give us due recognition. The salary of the State Veterinarian will be increased to a proper figure and he will be given the necessary corps of assistants.

We should see that the same is true respecting the cities of the state and that new offices are created for the veterinarians. It is our duty as veterinarians to see that Denver improves its present meat and milk supply, and that the offices are filled by veterinarians that are indorsed by this association, and not by the laity.

This association should not rest until the four appointments of meat inspectors for the city of Denver, now held by the laity, are held by qualified veterinarians. Our good mayor, as per-

haps you all know, recently appointed for Denver four meat inspectors, none of whom were veterinarians. This was a mistake and short-sighted.

I am sorry to say that our mayor does not appear to appreciate the scientific veterinarian as a necessary factor in caring for the health of the municipality.

He does not seem to appreciate that a meat inspector should be a skilled veterinarian, neither does he feel that veterinary inspection of our city's food supply should, necessarily, be looked after by the skilled veterinarian. Why is this, you ask? It is because our good mayor is skeptical when it comes to waging war against infection. He is therefore in need of veterinary missionary work, and we should not rest until he is a safe and sound convert.

We must not always construe a criticism as a "knock," for it is so oftentimes a boost. Some of you may be coming to the conclusion that I am a pretty good knocker. If so, I wish to assure you that you are misjudging me. I have found it my duty to speak against the non-educated men practicing veterinary surgery in our state, but it was distasteful to me. I have found it my duty to my profession to speak in criticising tones of some of my colleagues, which grieved me. I have also found it my lot to speak in criticism of our city and state government, and the importance of appointing a veterinarian to serve both of these. All of these criticisms made by me were not a pleasure, but it has been my solemn duty to our profession, regardless of what hard feelings they may bring about, if any.

Some say that every knock means a boost for the other fellow, but this is not always true. We must plead our rights and our cause in order that we may receive proper recognition from the people at large, and to do that we must call their attention to our usefulness.

It has been my desire and aim during the past three years to create a sentiment in Colorado whereby the present state and municipalities might improve their respective veterinary inspection laws as regards our meat and our dairy supplies, and

at the same time create more work for the veterinarians. My idea of bringing about this necessary reform or improvement or present conditions was to read two papers on this line of work before the medical associations, with the view of first having them appreciate the importance of the improvement, so that they might help convert the public to enact laws and make necessary appropriations to bring about the desired changes.

While we have changed the sentiments greatly during the past three years, at the same time there is much work yet to be done by the professions of medicine before our ideas will materialize greatly. When I first came to Colorado, if I happened to remark, as I often did, that Colorado cows were subject to tuberculosis, that many of them are infected, I would get an answer at once to the effect that the cows in Colorado never have tuberculosis and therefore it is not necessary to test and free our dairy herds of tubercular cattle. But the feeling on this question is quite different to-day. Good missionary work in the West brought about a change of views, so it does count for something, don't you think? We must keep up this missionary work in the West and South. By so doing we will, in time, have equal veterinary laws governing our part of the country with that of Eastern States.

Veterinarians should get into politics, provided we ever expect to get all that is justly due us. We must get into politics and get laws that will benefit our profession.

Take a look at Colorado and its ozone climate, and our great city of the plains—"Queen City of the Plains," or "City Beautiful," as it is so often called. This ozone climate of Colorado, which we all crave and long for when we leave the state, is daily restoring thousands of poor, suffering people to health and to a life of comfort, pleasure and usefulness, especially those who have lost their health in other states or parts of the country and come to our state to recover.

Colorado should be called the "National Health Resort."

After I have made the above observation regarding our state of Colorado and city of Denver (which is the capital of the

state) you would naturally suppose that one would, on visiting our state or city, find in preparation an ideal veterinary meat, dairy and milk system of inspection.

Since the population of the state is largely made up of people that have come here for the improvement of their health, it stands our state and city government in hand to spare no expense to put our milk and meat supplies on a high plane of wholesomeness.

It also stands our state in hand to spare no pains to increase the dairy output many times what it is at the present time. Since milk is one of the chief diets of people in ill health, the consumption of milk should be great in our state. But the consumption of milk will not be what it should until we first give to the public milk that is free from disease and sealed with the city or state seal as a guarantee of wholesomeness. The state and municipalities owe this protection to the public, and the public should demand that they get full protection by having veterinary sanitary experts in the field.

It is not generally known by the public that the meat inspectors of Denver are not veterinarians and have not been educated to pursue such work intelligently. The public should know that only the scientifically educated veterinarians are competent to inspect meat for food.

The same is true with our milk supply in Denver. It doesn't pass veterinary inspection, either. The city did not call upon the veterinary profession when it wanted a milk or dairy inspector.

Our dairy barns and herds are not inspected for sanitation and disease. These are all left to the conscience and intelligence of the dairyman; he is merely supposed not to milk a cow that is unhealthy, and is not compelled to keep his milking utensils sterilized. Some dairymen are very considerate of the public welfare and take a pride in turning out as wholesome milk as they can with the equipments at hand, but the majority are not so considerate. Our present plan of city milk inspection is

based more on the examination of the milk from a standpoint of adulteration. Denver milk is not examined from a bacteriological standpoint, which is the more important of the two. We know that water, when clean, will not kill people; we also know that infection will injure our bodies and may take life.

We must fight for the regaining of the lost confidence of the public in the use of milk. To do this the state must first furnish to the public, through its dairies, *certified pure milk*. The consumption of milk would increase 50 per cent. or more thereafter. And this being true, we would have twice as many dairy cows, twice as much milk to increase our state revenue. So you can see, from both a financial and health point of view, it is very important to our state that the people are furnished wholesome milk and meat.

What Denver and every other municipality needs and must have is a scientifically educated veterinarian as a member of its board of health, his duties being to look after the city's food supply. Such an office should be created at once, and an appointment made, regardless of politics. We should not tolerate longer the city health officials trying to do the work that we should do. At the present time the city health commissioner (Dr. Sharpley) is acting both in the capacity of veterinarian and physician, but only has the M. D. degree.

An inadequate milk and meat inspection system for a city does more harm than good, by putting the public off its guard. The public naturally supposes that the city would not tolerate anything but an up-to-date inspection system. It therefore becomes a moral obligation of the state and city governments to protect the public from buying anything but good, wholesome food, since they depend upon the law for protection.

It should be in Colorado, as it is in the state of Pennsylvania, and many other Eastern states where not a single cow is allowed to furnish milk that has not been tested for tuberculosis once a year.

It is also of extreme importance to our people who are already victims of tuberculosis not to drink milk from tubercular cows, for, in so doing they are doubtless heaping fuel upon the already raging disease.

While speaking on the subject of tuberculosis I want to say that I am surprised to think that there has not been a law enforced in Colorado and Denver requiring sanitary soda fountains. One can stand off and observe the type of patrons of our Denver soda fountains. Take one of the largest fountains, like Scholts' or Trunk's, and note the class of people that are drinking at them; you will probably see 50 per cent. or more of them are victims of tuberculosis, for they are feeling "poorly," and go to the fountains to get a milk or egg drink, or something of that sort. The glasses and spoons used by the hundreds of patrons with tuberculosis daily are not boiled or sterilized after they are used, but are rinsed or wiped in tepid water, and oftentimes in cold water, without rinsing. So you can see at a glance that within a few hours, or days at the most, one of the soda fountains will have every utensil thoroughly infected with the tubercle bacilli. So that when you buy a glass of soda you will get served with each glass the tubercle bacilli free of charge. We should have a law requiring that the soda fountains in Colorado be equipped for sterilizing the utensils, and an inspector to see that they are sterilized.

The cup system of public drinking fountains for water should be replaced by the system that is now used at the public schools, for they are ideal in construction, it being practically impossible to contract disease from them.

I would like to go more into detail with the above subjects but I must draw my remarks to a close and take up other subjects of equal interest or importance to our profession at least. So, in conclusion, I want to speak to you regarding veterinary ethics in Colorado. I certainly hope that it is in my power to say something to improve present bad conditions. If I do not I truly hope that some of you may.

Before saying anything on this subject let me say to you, my brother colleagues, in all seriousness, that I am not desirous of making any personal attacks against any of you. What I wish to say is for the good of the profession at large, and for you individually, so I would ask that you take no individual offense. I can and could exist and get along with the prevailing bad conditions here, and so could you also.

I assure you that I have the interest of every ethical and well-meaning veterinarian of this association at heart, and they will always find me ready to help them in any way possible. I am also very anxious to see this association composed of high-class, progressive men, and, above all, that it be of material aid to individual members so that they will feel that to succeed in the practice of veterinary medicine they must be members of this association in good standing.

This association must watch the interests of its individual members with a jealous eye. I wish good-fellowship to prevail among our body. I would like to see the overflowing spirit of jealousy that now prevails among our Denver veterinarians buried so deep that it will never be dug up so long as this world lasts. It is wise and proper that we get together, work and think together as a united body. We must co-operate in everything. We must, each and every one, abide by the actions of the majority of members of this association. We should have a well-formed code of ethics to work by and one that is thoroughly understood by each member. When a member has signed the code and violates it he should answer to the board of directors; and if his actions are not excusable his name should be dropped from the roll of membership. If this association cannot have and enforce a code of ethics upon its members it had better not try to exist. The one object above all others of organizing this body was to work and protect one another, individually and collectively.

Without this fraternal spirit a veterinarian would have no inducement (only for the advancement of the profession) for becoming a member of our association.

It must be our desire to educate the public to our knowledge and usefulness so that our profession will be appreciated. Our main mission must be directed toward relegating the "quack" veterinarians to the rear, that we may take the field for ourselves. We must each, in our daily work, put on our "fighting clothes" and do our utmost to free the land of the non-educated veterinary surgeons, for they greatly retard our advancement. This country does not owe these young "quacks" the living that it once thought that it owed the old fellows.

We should meet together once or twice a year and devise further plans against the enemy. In order for us to gain the field of victory we must work hard to improve our state veterinary laws or else lose the state to the imperics.

I regret to say to this association that I am unable to see any ethics at all practiced by our Denver veterinarians, socially or professionally. It appears to me that the motto is "every veterinarian is for himself." Professional consultation is unknown among us. Such a selfish spirit must not exist if we know what is best for our own interests.

On coming to Denver to practice I made it my business to make a professional call of respect upon all the graduated and non-graduated veterinarians practicing in Denver. Out of the number only one or two received and gave me a professional welcome. They made me feel that I was treading upon their hunting ground, showing a decided spirit of professional jealousy.

We, as professional gentlemen, should receive and treat with professional courtesy every representative of the profession in recognized standing, both professionally and socially. I have been practicing in Denver over three years, and during that time only one veterinarian and his wife have paid their respects to my family by calling. There is practically no social congeniality among our Denver men.

There is no general understanding as to what should be a proper charge for this or that service. We should confine ourselves to a uniform charge, as best we can; otherwise the public

will think that we are holding it up. Some of our members are undoubtedly charging too much while others are not charging enough.

Some of the members of this association who have calls that they cannot look after are sending calls to the "quacks" in preference to the graduates or members of this association. Such actions should not be tolerated by this body. When a member receives a call that he cannot care for it is his duty to the other members to see that calls do not fall into the hands of imperics, but that a member of this association is called.

The proper way for us to handle such calls would be to tell the client, when he asks for our services, that we will send him a veterinarian to look after the case.

We should then step to the telephone and call members of this association, until we get one that will go and look after the case. In this way we would keep from the imperics many thousands of dollars worth of work annually. In fact, for a member not to adopt this method, or not to make it his duty to see that the call falls into the hands of a member of this association, should be sufficient grounds for said member to forfeit his membership.

I am pleased to see so many of you at this banquet and I sincerely hope that the addition of the same to our annual programme will add greatly to the enthusiasm of our members. It is my wish to see a membership of quality as well as quantity; a membership of congenialty, not strife; a membership of men that are not desirous of retarding, but advancing the association.

If we have only a baker's dozen of members in this association they had better be those who are of the right type. One obnoxious member will keep from this association many good men that would take an active interest and do something worth while for us all.

We must be careful what statements are made upon the floor of this association. Oftentimes newspaper reporters are present who will not appreciate a joke and may misconstrue our state-

ments as having been a part of the official proceedings of this association. You no doubt recall the matter that went into the press a few years ago which pictured us as a body of ignorant "hoss doctors." Therefore I would ask that we be careful what is said before this association at all times.

HEARTFELT expressions of regret, upon the death of Editor Bell, are contained in nearly every letter received at the REVIEW office.

A TRUTHFUL DEALER.—"But," asked the absolutely bald old party, "can I be assured that this horse is quite gentle?"

"My dear sir," replied the foxy horse dealer, "he wouldn't harm a hair of your head."—(*Philadelphia Press.*)

THE UNRAVELLED BARGAIN.—At one of the sale-yards a gentleman observed a disqualified jockey and a horse dealer haggling over the sale of a horse. Full of curiosity when the two separated, and anxious to know how two such shrewd characters had bargained, the gentleman called the jockey to him and inquired how much he had got for his animal.

The jockey opened his hand and showed a sovereign and a florin.

"But isn't that very cheap?"

"No," said the jockey; "he's dead lame."

The gentleman then sought the dealer, and said:

"So you've given 22 shillings for a lame horse?"

The dealer laid his finger on his nose and said:

"Lame! He's as sound as you are. I saw he was badly shod, and only limped in consequence."

The inquirer returned to the jockey, and reported what the dealer said. The former gave a tremendous and significant wink, and whispered:

"He's as lame as a two-legged stool. I had him badly shod on purpose to make them believe that that was the cause of his limping."

When this was communicated to the dealer he seemed for the moment taken aback, and hung his head; then, with a little sigh and a shrug of his shoulders, he said, quietly:

"Ah, well, it's all right—it was a bad sovereign."—(*Tit-Bits.*)

ARTIFICIAL IMPREGNATION OF DOMESTIC ANIMALS.

BY WM. H. GRIBBLE, D.V.S., WASHINGTON C. H., OHIO.

A Paper Presented to the Twenty-fifth Annual Session of the Ohio State Veterinary Medical Association.

There may be gentlemen in this room who have had more experience, and who know more about artificial impregnation than your humble servant; but if this be true, we most emphatically say that they have been very derelict in their duty to their colleagues, in the fact of never having mentioned the subject, while so many veterinarians, even to-day, have not the remotest idea of the operative methods, its general use, or its practical results. The many years and the hundreds of times we have performed this operation is scarcely an excuse for us being so careless as to what others know of the subject; but when you know that part of the year we see its everyday use, performed not only by ourselves but by stablemen, stallioneers and grooms, it is very natural for one thus thrown daily among it, to presume that the subject is well understood, at least by the veterinary profession.

An article by Dr. E. A. Grange in the AMERICAN VETERINARY REVIEW, for May, 1907, and then again an editorial from the pen of Prof. A. Liautard, in the November, 1907, issue of same journal, but more particularly recent conversations and communications with our veterinary friends, now leads us to know, that the subject is not nearly so well understood as we had supposed, especially among the veterinary practitioners of our cities.

Twenty years ago we personally knew absolutely nothing about real artificial impregnation; had never heard it spoken of or even hinted at, at either of the veterinary colleges of which we had the honor of being graduated; and the only thing we had ever seen in print bearing even indirectly on the subject, was a sort of theoretical article, claiming success in the impregnation

of the human female by using a sort of tube called a dilator, placed directly in the os uteri and left for a time.

In the next succeeding years, however, so-called impregnators, which were simply dilators, of every conceivable shape, could be found advertised in our stock journals.

At about this time, practically all cases of failure to breed was attributed to a contracted and rigid condition of the cervix, thus closing its opening, and preventing the passage of spermatozoa.

For this difficulty, a treatment very successful in our hands, but at that time almost universally condemned by the veterinary profession as worse than useless, was to dilate the mouth of the uterus, mechanically.

This dilating of the os uteri, or "opening up," as it is commonly called, consists simply of, just previous to service by the male of passing the hand into the vagina, fingers held cone-shape, and by gentle pressure and rotary movements, dilate the mouth of the womb sufficient to allow the hand to pass through.

Just here let us say, that this hand dilation is not practical with cows. An intensely rigid condition of the cervix seems to be perfectly normal with them; at least in the large number we have examined we have never found one in any other way, even in heifers, or regular breeders if some little time had elapsed since calving; and this rigid condition in non-breeders is such, that dilation to the size of the hand is well nigh impossible without causing an injury, or the use of a knife.

With cows we use a smooth, nickel-plated probe, round and tapering quite rapidly to a diameter of half or three-quarters of an inch.

This sized opening seems to be sufficient for the purpose.

We have proven the usefulness of these operations many times, by barren females becoming pregnant from the first service of the male following after this simple treatment, while repeated service previous had been failures.

July 12, 1887, we were consulted by C. A. Foster, M. D., in reference to a valuable mare that failed to get in foal after

repeated trials, and which on examination showed indurated cervix. He asked us: Do veterinarians operate as in human practice, by dilating the os? and on being answered in the affirmative, he requested us to take the mare twenty-six miles, "open her up," have her bred, and bring her back.

We took her next day and attempted to operate as usual, using belladonna extract, etc., but it was slow work; parts were more rigid than any we had before met; and becoming impatient, we probably used too much force, for suddenly something gave way, my hand passed into the uterus, and we were covered with blood. We surely had an excessive hæmorrhage for such a simple injury, and I was somewhat nervous, but treated the matter lightly by saying: "Oh, this is nothing unusual." Packing the vagina with tow and glycerine, stayed all night, and in the morning on removal of this tampon we found a badly torn, wide-open os uteri.

After removing the clotted blood and carefully cleansing the parts with warm carbolized water, the mare was served twice in close succession.

She exhibited some pain when we, with no other object in view, passed our hand into the vagina to see if the actions of the stallion had produced any further injury. Finding an abundance of semen, and fearing its loss on our long drive home, we placed our fingers close together, scoop shape, and carried this semen (not a difficult job) into the wide open uterus.

The mare was not served again and raised a fine colt.

For some reason, this case did not impress us as much out of the ordinary, and we almost forgot the impregnation, giving the "opening up" the credit.

In May, 1890, Squires Bros. consulted us as to treatment of a barren mare that they were very anxious to get in foal.

This mare had raised two colts, but although repeatedly served by different horses, and as often "opened up," she could not be gotten in foal again. Without making any examination at all, and presuming the trouble due to a rigid os, that con-

tracted very rapidly after being dilated, we called the owners' attention to the article we had read on human dilators, when he with the owner of the stallion offered to make it financially interesting to me to get this mare in foal if possible.

Fashioning our instrument as best we know, we had made a rough shaped, sort of spring stool dilator, to place in the os uteri to keep it open during and after service of horse, thus preventing contraction, besides giving the spermatozoa time to pass through.

When all was ready and we prepared to insert our dilator, imagine our feelings (quite a number of bystanders) to find the os dilated so large that our hand passed through without resistance; we also found that at the previous birth, the mucous membrane of the vagina had been torn at about the cervix, and this injury, in healing, had left the membrane like a curtain, directly across the opening, adhered to the sides and bottom, and had to be pressed down to allow the hand to enter the os.

Our plans had come to naught; what should we do?

Failure to conceive not due to rigid os, but undoubtedly to the inability of the semen to pass this mucus partition.

Should we, at arm's length, take scissors and remove this obstruction? No. Mare is in season and in readiness, hæmorrhage will result, and put the case off three weeks longer. A thought strikes us: Case No. 1, assist nature.

The mare is served in the usual manner, while we, taking a good-sized common spoon, bend up its sides sort of bowl shape, then inserting our hand armed with the spoon, dip semen from vagina into uterus.

No other service was required, and in due time we were paid the largest fee for the time occupied in earning, it has ever been our pleasure to receive.

On July 22, 1891, a joint session of the Ohio and Michigan State Veterinary Medical Associations convened in the city of Detroit, Mich.

Your humble servant, after reading a paper on in-breeding, spoke enthusiastically of seeming successful treatment of barren mares, and suggested certain uses and shape of impregnators.

In the discussion that followed, we found ourselves like the lone mariner; not one single veterinarian present but who opposed our views, and opposed them so strenuously that, in the published report of that meeting, we were actually ashamed to mention our remarks on the subject, as my enthusiasm of these, to me, successes, had been ruthlessly thrown down, trampled upon, and relegated to the category of chance.

Time and experiments, however, have proven that we were in the right.

Let us give you a few of the expressions of the recorded enthusiasm dampeners that were given to me at that meeting.

A prominent veterinarian of Michigan asked: "I would like to know what an impregnator was used for, anyway; there is no sense in it."

An Indiana man declared: "This opening of mares is a great humbug."

An Ohio practitioner said that he "Had tried impregnators, but found them of no use whatever."

An Ohio veterinarian "Could not see how an impregnator could be of any use whatever, unless it be in case of loose, flabby os."

Another Ohio veterinarian "Had used different kinds of impregnators, and known of others to use them, but they are the most consummate humbug ever perpetrated on horse-owners of to-day."

A Michigan man, who was chairman of the meeting, remarked that "All seem to agree that the so-called impregnators are nothing more nor less than humbugs."

From the report of the meeting, to the article by Dr. Grange in May of this year, we have no remembrance of having seen one word on the subject, either in discussions of veterinary associations, or in that ever-ready to record journal, the AMERICAN VETERINARY REVIEW.

By the term artificial impregnation, the two cases we have just reported show you that it means no theory of an artificial semen, or an artificial place for impregnation; but practical facts and results in producing impregnation by any artificial means of conveying the semen of the male to the uterus of the female, no matter whether the particular female impregnated is embraced by the male, or is not even in the immediate locality of the male.

The operation is not necessarily performed because of barrenness of the female, but far more often, in fact the major part, is to increase the utility of the male, and it is this latter reason that has given us the greater part of our experience, due, we admit, to the result of an accident to the penis of a well-known stallion.

Besides this latter, our home locality is one of the great breeding districts, the home of some very fine trotting and draft-bred stallions, having more service than they could possibly attend to were it not for artificial impregnation; so with all, the subject is one of considerable importance to us, being an ever increasing operation, more and more each year, until for the last twelve or fifteen years it has been a regular part of our professional labors; while now, during the breeding season, it is of daily occurrence and oftentimes two, three, and four times a day.

At first we kept records, more especially of females not covered by the male; but when the operation became of such frequent occurrence, the novelty wore off, records were forgotten, and we hardly gave the matter a thought.

In our experiments, we have proven beyond doubt that oftentimes the glans penis of the male enters the os uteri, is encircled by the cervix of the female, and ejaculations are directly into the uterus; but more frequently the ejaculated semen is thrown directly through the open os, and is the reason of success for the so-called dilators and the operation of "opening up," as well as the reason why females embraced by the male shortly after giving birth conceive so much easier than at any other time.

Only a small quantity of semen is necessary to produce conception, as one living spermatozoa of sufficient vitality is all that is needed.

To impregnate intelligently, as well as successfully, one must know his horse, must know the quality of the semen—in other words, know the relative number of living cells a given quantity of semen contains.

The amount of semen ejaculated varies greatly in different horses, as well as the number of spermatozoa it contains; some horses ejaculate large quantities having a small percentage of spermatozoa, while others ejaculating a much smaller quantity would contain in the aggregate fully as many or more living cells. The number of spermatozoa found in the semen of a well-kept, properly cared for stallion will, as we before stated, vary greatly, but will be in rough numbers about four thousand to the drop. This will be greatly reduced, both in number and in vitality, in the horse improperly cared for, or, more particularly, used too frequently; in fact the number and vitality depend almost entirely on the proper use or abuse of the animal. There will be more spermatozoa, and of greater vitality, from a horse used once in a day, than in three times, if the animal be used that number of times in one day.

In young stallions used too frequently, we have often found that the semen contained practically no spermatozoa, of any vitality, at all.

The exposure or non-exposure of spermatozoa to the air does not seem to produce any different effect, but exposure to heat causes rapid death. They die far more rapidly at a temperature above 100° F. than they do at a temperature below 100° F., even as low as 95° F.; in fact they live much the longer at the lower temperature.

We have found spermatozoa kept at a temperature of 105° F. to be all dead in two hours or less, while that kept at a temperature of 95° F., some were alive even after three hours. That kept at 110° F. were all dead when examined in thirty minutes, while some few were alive in that kept at 90° F.

The reason for this we have as yet been unable to determine; it is strange, especially when you remember that the temperature of vagina is 100° F.

Much of the newspaper and stable talk in reference to this subject is worse than nonsense; one stallioneer writes of having bred forty from one cover, while Dr. Lewis speaks of one man in central Iowa who claimed to have bred ninety mares in one day from one stallion.

Don't believe such stuff; unless they caught the urine and used that. Again, we hear, and read, of semen being shipped in capsules long distances and used with success. I have not, as yet, found one authenticated proof of such a fact, and will have to be shown, as our experience shows the limit of life of spermatozoa outside the animal body, under the most favorable circumstances we know of at present, to be not much, if any, over three hours.

How long they will live carried in the vagina, and on transfer to another mare be capable of conception, we have not been able to decide as yet.

We have experimented some and know that the length of life is greatly extended. One experiment nearly resulted in a lawsuit.

Mare was brought to town, bred in the usual manner, then taken home quite a distance to the farm of the owner. After standing in the stable some time, it was noticed she was wasting some. Another mare in the stable being in season, gave a good chance for an experiment. Owner was willing.

With a common one-ounce rubber syringe, nozzle removed, part of the semen was transferred to the uterus of the other mare.

Both had colts, both colts are bays, both are mares, while one dam is sorrel, the other grey, and the sire grey.

Time elapsing from breeding to transfer was several hours.

Sometimes, as in the case just mentioned, we draw the semen up into the syringe directly from the floor of the vagina; but this is very unsatisfactory, as the folds of the mucous membrane, in spite of the best of care, will suck up into the opening of syringe and plug it, and the action of air on the semen in a pan seems to have no deleterious effect.

We have caught semen in an enameled pan on a warm day in June, walked a full mile or more, carrying the pan in our hands, no artificial heat, simply the heat of the sun then impregnated with success.

We have carried the semen in screw-top bottle in the pocket of our shirt, coat and vest buttoned, drove seven miles, transferred it to the mare, and she got with foal. This was done twice, as she came in season again after the first attempt. This mare was hanging in slings, suffering from an incomplete fracture of the tibia, and knowing her uselessness for several months, was personally interested in its being a success.

The most peculiar case we ever met in this line was a large, gray Norman mare weighing over sixteen hundred pounds. She had had one or two colts and no trouble, then it seemed impossible to get her in foal any more.

Examination showed parts to be normal, but repeated impregnations were useless, and when we say repeated we mean it, for the attempts covered a series of two years, as we hated to give it up. We had about decided that she was surely barren, when one day in breeding another mare, we used the surplus in the big grey, and was surprised by her getting in foal.

For four years this mare was experimented with; direct service, or impregnation from direct service, was absolutely a waste of time, but impregnate her from service given another mare, and she was gotten in foal without trouble; in fact it was so easily done, that in only one year of the four was it necessary to do this twice. This was some years ago and the mare is gone, but were she here now, we should certainly test the vaginal discharge, a thing we then did not think of, yet often thought, that for some peculiar reason, the sperm deposited in her vagina was immediately destroyed.

We have abandoned the use of the speculum, as it is inconvenient and unnecessary.

An article extensively advertised, and sometimes used to catch the semen, is the so-called Breeders' bag. This bag is made

of very thin rubber, is slipped over the horse's penis just previous to service, then lubricated with a warm jelly of pulverized slippery elm bark. After service the bag is removed, placed in warm water, and the semen transferred from it to the mares.

Our experience condemns it, as the horse soon revolts at its use, and refuses to cover.

As to instruments necessary: we have used all sorts of tubes, springs, sizes and shapes of syringes, capsules, spoons, tumblers, cups, cans, buckets, and even the hand alone; and it makes no material difference to the success of the operation; the only difference is one of convenience.

Failures are due, largely, to improper care of utensils and instrument or disregard to temperature; too cold, but more often too hot, as one not familiar with the feel of water at 100° F. easily gets it much above.

The best, most convenient, and easiest cared for impregnator, is simply a white metal, nickel-plated syringe, about twenty-two or twenty-four inches long, and not to exceed one-half inch in diameter, and curved about three inches from a straight line; piston full length and no glass.

The more complicated the instrument the more trouble to keep clean, and cleanliness is absolutely necessary. We boil every utensil used in soda solution, besides using disinfectants, and keep syringe in the best of order.

There is nothing in the anatomy of the mare or the *modus operandi* of the operation to make it at all difficult. It may be best to examine the mare in advance, but this is not necessary, especially if a small-sized syringe be used. Don't be in a hurry, there is no need for it; work carefully and as rapidly as convenient, so long as the water and instruments are at the proper temperature.

Stripped of unnecessary descriptions, our mode is as follows:

Heating a quantity of water, say two or three quarts, to a temperature of about 103° F., and kept there, or nearly so.

In this water is floating an absolutely clean enameled basin.

The impregnating syringe, also filled with this hot water, is kept at about the same temperature. The mare is hobbled and the service performed in the usual manner. Just previous to the withdrawal of the penis, the enameled basin is taken from the water, and held directly under the vulva, thus catching all wasted semen, and immediately placed back in the water again. If this waste is sufficient, well and good; but if not, after waiting a few minutes for the semen to collect, the hand is inserted into vagina, and by bending the fingers, that deposited there is drawn out into our basin. Syringe is emptied of water, semen drawn into it, and again inserting our hand, the syringe is carried directly to the os, passed into the uterus as far as can conveniently be done, then emptied.

The number of mares that can be impregnated from one service simply depends on the quantity and quality, which varies greatly; we have impregnated two and three several times, and once four, all of the latter gotten in foal.

Several years ago a now widely known stallion met with an accident that produced extreme left curvature of the penis when in erection; so much curved that the glans penis can be seen to the outside of the animal's flank.

This deformity not only interferes with copulation, but with the proper ejaculation of semen. It is very difficult for the penis to enter the vulva, requiring both hands of an attendant; and then, when having entered, being so curved against the side of the vagina that the semen is not thrown forward, but left so close to the outside, that, on withdrawal of the penis or even before, nearly, if not all of semen deposited wastes out. Something had to be done. Artificial impregnation was adopted, for practically every mare brought to this horse until to-day, it is not looked upon as a trouble, but as a great saver of time and horse; for the results of last year show that while he is twenty years old, and in spite of his half-circle penis, more than eighty colts stood up and sucked and were paid for.

Whether in the show class, or by their speed performances, these hand-made colts speak for themselves; they have taken the blue at Madison Square Garden, they have made their sire, the champion sire of new performers for 1906, the champion sire of 2.20 performers for 1907; they have made him first, second, or third, as the sire of new performers for five or six years; a truly wonderful record.

Don't mistake us, and think in our enthusiasm that we wish you to believe that artificial impregnation makes handsome horses, or accelerates their speed (by no means); but we do say, and offer you the proof, that it in no way retards these desirable aims.

When again you see a colt from this sire, as many of you have, speeding round the ring at 2.06 or 7, think of this paper, and do not forget that its writer (most likely) started that colt on its journey of life through the media of a pan of warm water and a nickel-plated syringe.

CONSTIPATING EFFECT OF MORPHINE.—Magnus, investigating the constipating action of morphine, says that it is the stomach that is most affected by it. The constipating effect is not produced on the sympathetic nervous fiber. The chief action is persistent contraction of the stomach wall, in the neighborhood of the pyloric orifice. The passage of food into the duodenum is belated; the small intestine is greatly affected, colon least of all. These observations were made on cats and dogs.—(*Medical Record*.)

THE WILY OWL.—A party of horsemen were traveling along Bridge Creek, a tributary of Bad Water River, Wyoming, when their horses suddenly shied off the track at the sound of a "rattle." Search was made for the snake, but it was finally found that the sound proceeded from the burrowing owl, which lives in the burrows of the prairie dog, often, it is said, in company with the rattlesnake. Seated on a post the party heard the owl give a third rattle. And whenever they passed the spot it gave warning by its rattle, and the horses always shied off the track in alarm.—(*American Naturalist*.)

ONE PROBLEM IN MEAT HYGIENE.

BY LOUIS A. KLEIN, DEPUTY STATE VETERINARIAN OF PENNSYLVANIA.

A Paper Read at the Annual Meeting of the Pennsylvania State Veterinary Medical Association, Philadelphia, March 6-7, 1908.

Cleanliness in a slaughter-house is necessary to insure wholesome products. There are many things which facilitate the maintenance of cleanliness. Tight, smooth, well-drained floors, smooth walls, sufficient light and ventilation, an abundant supply of water, and proper storage of hides and bones, are all of great assistance, but none of these is as important as a simple, economical method of disposing of the blood, offal, stomach contents and other refuse. If these substances are not properly cared for and are permitted to collect about the premises, even to a small degree, conditions are established favorable to the growth of putrefactive organisms and flies and the generation of foul odors. Not only the meats and meat products prepared in such places are likely to be injuriously affected, but the tools and instruments and the butchers' clothing and hands may also be contaminated.

When the organs are affected with certain parasitic and bacterial diseases it is also important from the standpoint of public hygiene that they be properly disposed of. Dogs may become infested with tapeworms from organs infested with Echinococci, Coenuri and Cysticerci, and may in turn infest man with Echinococci and animals with Echinococci, Coenuri and Cysticerci. Organs from animals affected with tuberculosis, hog cholera and swine plague, may produce these diseases in hogs when fed to them in the raw condition. Hogs may become infested with trichina in the same way, rendering their flesh injurious to man, and dogs and rats may also become infested with this parasite in a similar manner and assist in spreading the infection. Fluke disease in man, cattle and sheep, and grub in

sheep, may be propagated by carelessness in disposing of infested organs, and until the life history of the tapeworms of cattle and sheep and nodule worm of sheep is better known, organs infested with these parasites must be regarded as dangerous. On account of the methods used in disposing of offal and refuse matter, country slaughter-houses and those on the outskirts of small towns have come under the suspicion of being centres of infection, especially when they are located along streams, as many of them are.

In the larger slaughter-houses the quantity of blood, offal and refuse matter is sufficiently large to make it profitable to install sanitary rendering tanks, dryers, etc., to render the discarded materials into saleable products, and where such a plant is in operation the commercial value of the end products is sufficient to cause everything to be carefully collected. In the cities and larger towns there is usually a rendering plant which sends wagons around to the small slaughter-houses and to the meat markets to collect this material. But in the small slaughter-houses in the country, and in small towns, the disposal of the blood, offal, etc., is one of the greatest problems connected with meat hygiene. There is not enough of the material produced to make it profitable to install one of the ordinary rendering plants to work it up into commercial products, and there is not sufficient steam or power to operate such a plant. In these establishments, therefore, it is not a question of how to make the most profit out of these substances, but how to get rid of them most economically.

A solution of the problem has been attempted in several ways. At some places everything but the edible parts and the hides has been thrown into a convenient creek. It has been the general custom to discharge the waste water and the blood also, where it was not fed to hogs, into a stream, or into a cesspool when a stream was not accessible. A few butchers have buried the solid parts in a manure heap on their premises, but the stench which permeated the air when the manure was removed was very pronounced, and when there were any near neighbors

this plan had to be abandoned. In many cases the material is buried, or it is hauled to a nearby farm where it scattered on the land and plowed under or buried in the manure pile. Some butchers who follow this plan in summer haul the offal out into a nearby woods in winter and it is devoured by dogs and crows. at one place a hole is dug in the ground and the material is thrown into this and covered with lime, and when the hole is nearly filled dirt is piled up over it and another excavation is made. There is no unpleasant odor associated with this method. Perhaps the greatest number of butchers have been feeding the offal together with the blood and stomach contents, to hogs, the blood being allowed to flow through a hole in the floor or wall, or through a trough, into a tub, and the offal, with the stomachs unopened, being thrown out the door onto the ground. There are usually several dogs to assist the hogs in devouring the material. Such places have usually been found in a filthy condition. In some cases the offal is hauled to farms and thrown on the manure pile for hogs to eat.

Under the law forbidding the contamination of water-courses, the throwing of offal into streams, as well as the discharging of waste water and blood into them, has been stopped wherever it has been discovered, and under the rules and regulations adopted by the State Live Stock Sanitary Board for the government of the Meat Hygiene Service, hogs fed on offal have been placed in quarantine to be slaughtered under the examination of an agent of the Board. The reports of the conditions found at the post-mortem examinations made on these animals up to this time furnish strong evidence of the danger attending this practice. At one place, where forty-eight hogs were being fed on offal and were quarantined, thirty-nine were slaughtered under examination and thirty-eight were affected with tuberculosis. In sixteen of the latter the disease was generalized. The other nine died and were not examined, but it would appear likely that they were also affected with the same disease. Of another lot of fourteen hogs placed in quarantine, three were tubercular and six had echinococcus cysts in the liver.

In another lot of eight, the livers of six showed echinococcus cysts. One hog which was quarantined at another place was found on post-mortem examination to be affected with generalized tuberculosis. In one lot of six hogs, one had echinococcus cysts in the liver. Another lot of six hogs was found to be free from disease when slaughtered. This is the only lot quarantined on account of being fed on offal and examined post-mortem up to this time, which has not been more or less diseased. Hog cholera and swine plague developed in a herd of twenty-three hogs which was being fed on offal. Ten died, and of the thirteen slaughtered four were condemned on account of hog cholera. From these facts it would appear that feeding hogs on slaughter-house offal not only spreads disease, but is also unprofitable. The other methods adopted in small country houses to dispose of this material are also objectionable, either on hygienic or economic grounds. Another plan is therefore necessary to meet the situation.

What is needed is some method that will enable the butcher to derive a small profit from the offal, or at least to dispose of it without expense. Such a plan, if it could be introduced at small expense, would no doubt be readily accepted, and if one could be found that would yield a small profit on the discarded material it would place the small butcher on a better basis to compete with the large packer, who derives much of his profits from the by-products of his establishment. There is no method in use now which will meet the situation, because until the Meat Hygiene Service of the State Live Stock Sanitary Board was established there was no system of meat inspection in existence that included these small country slaughter-houses. It will, therefore, be necessary to do some pioneer work along these lines.

In the sanitary rendering systems used in the larger establishments the offal is cooked in an air-tight tank or digester by steam under pressure, which melts the fat, breaks down the fat cells in the tissues, disintegrates the bones and other substances, and destroys parasites, disease germs and putrefactive organisms. The fat and the water containing gelatin rise to the top in sepa-

rate layers and are drawn off. The residue is then shut up again in the same tank, or removed to another vessel, and dried by steam. In the first operation the steam enters the interior of the tank; in the second, it goes into a jacket surrounding the tank. The vapors are drawn off by means of a vacuum. Some are condensed to liquid form and discharged into a sewer, while the non-condensable gases are carried over the furnace and burned. The principal difference between this apparatus and the common open kettle sometimes used by butchers is that the foul-smelling gases are drawn over the fire and burned. If a cover could be arranged for the kettle, with a connecting pipe to carry off the vapors in such a manner that they would be condensed to a liquid or burned, the principal objection to the use of the kettle would be removed. The material would not be subjected to as high a temperature in the kettle as in the tank, but if the boiling was continued for two and one-half hours, and if the pieces were not more than one to one and a half inches thick, the temperature would reach 185° F. within the individual pieces, and this would be sufficient to destroy the putrefactive germs, parasites and the vegetative forms of the pathogenic bacteria. The spores of anthrax, tetanus, blackleg, and malignant œdema can withstand this temperature, but animals affected with these diseases seldom or never reach slaughter-houses. After the material has been boiled sufficiently, the fat could be skimmed off and the residue dried on racks and, if necessary, subsequently ground in a mill and put in sacks. Fats of the grade secured in this way are worth about four cents a pound, and the residue, when dry and nearly odorless, is worth about one cent a pound. This material is used as a feed for hogs and poultry, and as a fertilizer.

Another plan which suggests itself is to treat the offal with some substance that would render it non-offensive while it remained about the slaughter-house and which would not destroy its value as a fertilizer, as lime does. Sulphuric acid seems to be adapted to this purpose. Being antiseptic, it would prevent putrefaction, and, while it decomposes and chars animal tissues,

it combines readily with albumen and would, therefore, bind up the nitrogen containing compound of the tissues, which is the most valuable for fertilizing purposes. The offal could be placed in barrels and treated with the acid, and later sold for fertilizer or given to any farmer who would haul it away. It is not known, however, in what dilution the acid would be effective, nor how much would be required for a given weight of offal, and until these points are determined, its availability must remain in doubt. One objection which may be made to sulphuric acid is the danger attendant upon handling it.

Ploennies formulated a method for utilizing the blood and the stomach and intestinal contents. The blood is peptonized by mixing it with the stomach contents of slaughtered hogs. It is then mixed with the contents of the stomachs of cattle and sheep, which has been previously dried, and the material obtained is a valuable feeding stuff.

Investigation along these lines is well worth our attention. Ostertag, at the conclusion of his book on meat inspection, says:

"Veterinarians will deserve the great gratitude of stock-raisers if they earnestly strive to introduce devices everywhere, but chiefly in abattoirs, whereby not only a certain destruction of whole animals and parts excluded from consumption, but also an advantageous technical utilization of this material may be accomplished. By this means a considerable portion of the national wealth will be saved instead of wasted, and the great loss which agriculture suffers through the condemnation of whole animals or parts of animals will be diminished."

RATS GRIND OFF THEIR TEETH.—A curiously marked stone has been found at Colebrooke, Devonshire, in the middle of a wheat rick, and geologists who have seen it express the opinion that the markings on the stone were caused by rats using it to grind their teeth, which otherwise grew to an inordinate length. Some rats have been even known to starve owing to their teeth getting too long.—(*London Globe*.)

REPORTS OF CASES.

"Careful observation makes a skillful practitioner, but his skill dies with him. By recording his observations, he adds to the knowledge of his profession, and assists by his facts in building up the solid edifice of pathological science."

PARTURIENT PARESIS IN A MARE—RECOVERY.

BY L. G. MARSHALL, V. M. D., ROME, BRADFORD CO., PENNA.

In May, 1907, I was called by Charles Easterbrook, a farmer of Rome, Bradford County, Pa., to see a brown mare, 12 years old, 16 hands high, weight 1,250 lbs., in good condition, and the mother of a colt one day old; the colt was strong and active. I saw the mare at 7 in the morning; she was down, unable to get up; the owner said she was all right the night before. Her temperature was 101, respiration quiet, owner said she was a regular breeder and was always a big milker until this time, and this time the milk dropped until three days before she had her colt, and now there was hardly any milk in the udder. After the examination of the mare, and with the history that she was a regular breeder and in the prime of life, I concluded she had "milk fever," or parturient paresis, and gave her oxygen treatment and one grain of strychnine. That is, she was treated as a cow with "milk fever." This was 8 in the morning, and the treatment was repeated at 11 and at 11.30. She then got on her feet with very little assistance, but seemed very weak at first, but after standing three minutes or so and after she was rubbed, she gained strength and acted very well, ate a quart of oats and took some water and seemed bright; so we went to dinner and left her alone. When we came out we found her down, but as we came into the box she got up as handy as any horse and walked over to the hay and started to eat, and we concluded she was out of danger. The owner has had cows with milk fever, so he knew the disease pretty well and we felt sure of the diagnosis. I went home, and telephoned him in the evening and he said the mare was all right, but in the morning he called me at 5 and said the mare was down the same as before. I saw her at 6 and started in and treated her the same as the day before, filling the udder with oxygen and giving a grain of strychnine, and obtained the same results, so I felt

confident that the treatment was right and concluded that it hadn't been carried out as long as it should have been, for the udder of a mare is small and there is not sufficient space to hold a good amount of oxygen. So on the second day I was more thorough, but it took a little longer to get her up than it did the first day. I think we had her up at one o'clock, but she gained strength very fast, and at three she looked so well I thought she was safe to leave. I telephoned in the evening, and they said she was doing fine, but wouldn't own the colt, and said they had the colt in with her, but had to keep a man there to keep her from killing the colt, and she hadn't any milk. I had already instructed them how to feed the colt on cow's milk and told them to continue feeding the colt in that way for a few days. They stayed up until midnight and turned the colt in a separate stall. The mare was in good condition when they left the stable. In the morning at 4.30 they found the mare down and unable to get up. This was the third time, and I was called at 5 and went to see her and found her much worse than at any time before. The first and second time I saw her, she could roll up on her sternum and turn her head to her side most of the time, but this time she was down on her side and unable to raise her head; temperature 100.8. It looked very doubtful as to whether we could revive her, but we gave the same treatment again and worked faithfully, although without much faith or success, from six in the morning until noon; then I sent the owner after my slings, and while he was gone I saw she was gaining a little. Her sense of feeling improved, and at three o'clock she got up by a little of my assistance and from that time improved very fast, and when the man returned with the slings she was better than she had been in three days. I stayed over night and inflated the udder with oxygen several times during the night. The mare came out all right and raised a nice colt.

I think if we had carried the treatment out longer and more thoroughly the first day she might have escaped the second attack.

FATAL IMPACTION OF THE PLACENTA IN THE RETICULUM OF A COW.

BY W. L. CLARK, D. V. M., SENECA FALLS, N. Y.

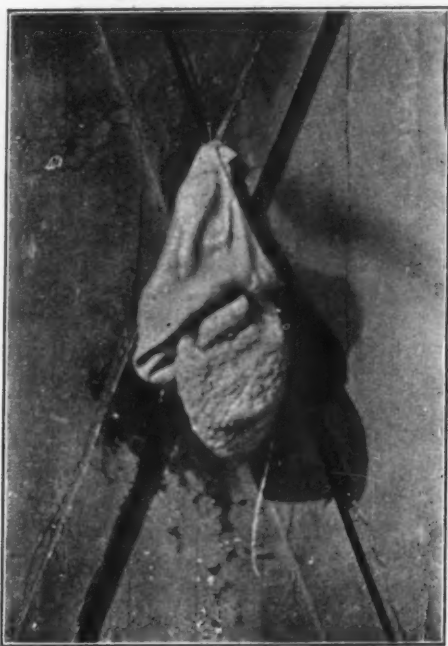
A six-year-old dairy cow had calved and, as is usual, had swallowed the after-birth. Three days later there were symp-

toms of gastro-intestinal obstruction, on which account the owner administered two pounds of Epsom salts, from which he secured no results. On the following day two more pounds of the salts were given without any material result, though a slight evacuation of the bowels was observed. The animal was found dead the next morning and a post-mortem examination revealed the after-birth firmly impacted in the reticulum wholly preventing the passage of aliment to the omasum or abomasum. The rumen was filled with food; the remainder of the digestive tract was empty.

TRAUMATIC PERICARDITIS.

By W. L. CLARK, D. V. M., SENECA FALLS, N. Y.

On February 20 I was called to see a large Holstein cow, seven years old. Upon my arrival, the animal was found lying



on the left side. There was hurried breathing and each expiration was accompanied by a moan. The brisket was swollen for

pen
a fib
ness
a ve
open
in w
cavi
eigh

about two feet. A diagnosis of traumatic pericarditis was made. We raised the animal to its feet and she fell over dead.

On post-mortem examination, there was found a wire two and a half inches long and a horseshoe nail which had worked their way from the reticulum into the pericardium. The horseshoe nail was found between the heart and pericardium and the wire was working its way toward the heart and had nearly



penetrated it. Over the whole surface of the heart was found a fibrinous, connective tissue growth one-half an inch in thickness. The thoracic cavity was filled with a yellow fluid with a very offensive odor. On examination there was found an opening in the pericardium one and one-half by one-half inches in width, through which the fluid had escaped into the pleural cavity. The pericardium surrounding the heart was three-eighths of an inch in thickness and also of a fibrinous character.

ANOTHER CASE OF PERSISTENT LACTATION IN A MULE.

By J. F. DEVINE, D. V. S., GOSHEN, N. Y.

In the October number of the REVIEW, 1907, Dr. L. Friedhiem, of Fair Hill, S. C., tells us of a mule giving a continuous flow of milk. Since then I have had under observation a large, valuable mule that has been milking for the past year, giving from four to six quarts morning and evening; it was at first interesting, but now has become an annoyance, as the owner has appealed to me to suppress the flow. The ordinary remedies, camphorated oil, etc., have been of no avail, and if any member of the profession wishes to incur my everlasting gratitude, he may do so by suggesting an efficient remedy. I hope my request will be taken seriously and that I shall hear from some good-spirited brother.

CHEMICAL symbol for dog—Kg.

LOST MATERIAL.—Assistant—Doctor, a sponge is missing; possibly you sewed it up inside the horse.

Veterinary Surgeon—Thank you; remind me to add ten dollars to the bill for material.

IOWA STATE COLLEGE VETERINARY MEDICAL SOCIETY HOLDS ANNUAL BANQUET.—On the evening of February 28, 1908, the Veterinary Medical Society of the Iowa State College Division of Veterinary Medicine held its 4th Annual Senior Alumni Banquet at the Chamberlain Hotel, Des Moines, Iowa. Plates were laid for one hundred and ten guests, including guests of honor, alumni, faculty and students. A six course dinner was served, after which toasts were responded to as follows: "The Future of the Veterinary Division," Hon. J. B. Hungerford, President, Board of Trustees; "The Veterinarian and the Farmer," Prof. Chas. F. Curtiss, Dean, Division of Agriculture, Iowa State College; "Some Unique Experiences of a Veterinary Inspector," Dr. Chester Miller, Veterinary Inspector, Des Moines; "The Opportunity of To-day," Prof. H. E. Summers, Iowa State College; "Unity," Mr. H. E. Bemis, Class '08; "Our Chief Aim," Hon. E. E. Faville, Editor, *Successful Farming*, Des Moines; "Veterinary Opportunities," Dr. R. R. Dykstra, Iowa State College.

RECENT DATA IN VETERINARY SCIENCE.

(Continued from March REVIEW.)

By Drs. LOUIS A. AND EDWARD MERILLAT, CHICAGO, ILL.

Operation for the Removal of Cystic Calculi in Geldings.—This operation is much more talked about than performed. Every book on veterinary surgery, and every teacher of veterinary surgery, has a more or less vivid story to tell about this picturesque procedure. The writer himself confesses the fault of having often explained the minutest details of the operation to students long before their correctness was verified by a practical experience. Searching over surgical literature, old and new, we find that the descriptions given of the method of relieving the male bladder of large concretions are very much alike. The reader is told to make an incision into the urethra at the ischial arch, pass a forceps through the opening into the bladder, grasp the stone, turn the forceps a few times to make sure that the mucous membrane is not engaged and then to draw it out without ceremony. If the stone is large, we are told to first break it into several pieces with a lithotrite. The urethral incision is left to heal up without sutures. As a rule, the operation is spoken of as difficult, unsatisfactory, dangerous, and in some cases impossible of performance, and a doubtful prognosis is generally predicted.

What are the real facts about this operation? To what extent may we transgress upon the urinary bladder of horses and what are the highest possibilities in this connection? How often has the operation really been performed? And lastly, are not many of the descriptions of the operation drawn more from the imagination than from actual experience?

In the first place urinary calculi are not very common among solipeds; their occurrence is exceptionally rare. They are much more frequent amongst dogs and cattle, in which animals they often develop in large numbers. They develop either in the pelvis of the kidney or in the bladder and only attract notice when one of them accidentally flows into the urethra and obstructs the passage of urine from the bladder. In the dog they usually lodge just behind the penal bone and in the ox at the first

part of the S-shaped curve, from which locations they can easily be removed; but in view of the fact that the bladder still harbors many more the patient is not protected against subsequent obstructions. More of them may flow into the urethra at any time and necessitate a repetition of the operation. This is especially the case with dogs.

In horses urinary calculi are much more apt to be single bodies which attract no attention until they have grown large enough to produce symptoms of a urinary derangement. Small ones may escape with the urine during micturition and attract no attention, and those of nominal size sometimes block up the urethra in the region of the ischium. The only urinary calculi of surgical interest in horses are therefore the large *cystic calculus* that interferes with the urinary function and the *urethral calculus* that obstructs the urethra. Renal calculi are seldom diagnosed and never operated against in horses.

The dearth of actual experience with operations against cystic calculi in geldings is not so remarkable when one takes into account, first, the rarity of urinary calculi in solipeds; secondly, the rarity with which they attract attention by producing urinary derangement, and, thirdly, the disinclination of practitioners to interfere when they are discovered. The facts that they are usually compatible with health, that they only occasionally interrupt the flow of urine, and that they seldom demand urgent intervention are additional reasons for our meager experience in the technique of the operation for their removal.

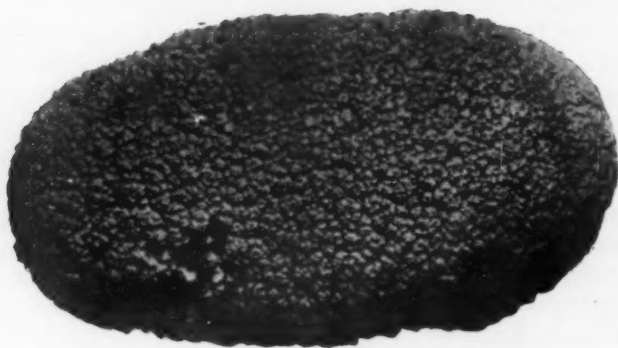
The following described case is one of exceptional importance because of the large size of the calculus as compared with the size of the horse; because the removal was effected with exceptional facility by a method not previously described; and because the operation was a perfect success in every particular.

The subject is a small bay gelding, eight years old, weighing 950 pounds, raised in Northern Illinois. For some months an unusual embarrassment of micturition was observed. The act was sometimes frequent, sometimes difficult, and sometimes the urine was tinged with blood. The general health was fair, condition of flesh good, appetite normal and general spirits perfect. The only abnormality disclosed by the preoperative examination was a marked redness of the mucous membranes and a slight elevation of the temperature, 101° Fahr. Palpation of the bladder per rectum showed that it contained a hard, movable, elongated, rounded object, about four inches long and

two inches thick, and of symmetrical profile. Squeezing it in the hand provoked tenesmus and the ejection of spurts of bloody urine. The walls of the bladder were perceptibly thickened evidently at the expense of its capacity.

After three days of careful dieting the subject was secured on the operating table and placed under profound anæsthesia with chloroform. The perineum and its environs were systematically disinfected with soap and water, mercuric chloride solution 1-500 and then dried with alcohol. A urinary catheter was passed into the bladder to facilitate the search for the urethra. The incision through the skin and the two layers of perineal fascia was made from the anus to the level of the ischial symphysis so as to expose the urethra from above instead of from behind as would be the case if the incision were made lower down. The advantage of this high incision which exposes the urethra in its horizontal position as it passes toward the bladder was proven by the comparative facility with which the calculus was subsequently removed. The urethrotomy was made in the raphe of the accelerator urinæ muscle, beginning as far forward as the urethra could be exposed and extending horizontally backward as far as the distal commissure of the external wound. The reader will note that while the incision in the outer integuments is perpendicular that in the urethra is mostly horizontal, and that its anterior end is not far from the bladder. (In case of a still larger calculus than the one in this case removed, it would be advisable to extend the incision anteriorly as far as the prostate which can be done without difficulty). When the incision was completed and the catheter removed a common obstetrical forceps, such as is used on large bitches or sows, was introduced in the bladder with the left hand as the right one in the rectum placed the calculus between its jaws. This part of the procedure was not difficult, in fact, the jaws seemed to pass around the calculus without assistance. The forceps were given one complete revolution to assure against a possible pinching up of the mucous membrane and then by gentle traction the calculus was promptly pulled backward where it could both be seen and felt. But this easy backward movement of the calculus to the level of the incision, by nothing more than very gentle traction, brought the bladder with it and wrinkled up that part of the urethra through which it must eventually pass to release it from its confined position. It was found here that the bladder can easily be pulled back far enough to bring a calculus within reach with-

out inflicting any injury whatever, and that while a horse is under profound anæsthesia the urethra is so relaxed as to admit of the passage of exceedingly large objects. Still, it was very evident after the calculus was drawn back to the incision, that considerable traction would be necessary to entirely release it, and as the surface was known to be exceedingly rough and cutting in character it was decided to pull it through by carefully peeling the urethra back as the traction was continued gentle. This peeling process was done by running the forefinger between the urethra and the calculus and thus gradually lifting the latter backward, here and there, as the former was drawn out farther and farther. When the calculus became wedged tight as its largest diameter sought passage through the incision the handle of a scalpel was used to peel the urethra back-



ward as now the urethra was too tightly stretched to admit the finger beneath it. By pulling the calculus backward and peeling the urethra forward simultaneously the release was effected in a very few minutes. The calculus which is shown in the accompanying illustration measured exactly nine centimeters in length and four and four-tenth centimeters in thickness. Its surface was exceedingly rough throughout with sharp projections that were capable of inflicting considerable injury to the mucous membrane, but on examination with the fingers after the removal it was found that very little injury had been done to its smooth surface. There was only a small abrasion superiorly which, however, bled copiously.

The urethra was closed through and through with a continuous suture of chromatized gut along the entire extent of the incision. The skin and the two layers of fascia were brought

in
or
w
dr
in
pa
the
usu
du
but
Th
tim
alm
mus
thro
sequ
prom
less
cysti
incis
as th
the m
"pee
can l
sutur
T
erinar
tion v
ber 21
A
and sa
cemet
field is
epidem
leave t
News
ture fi
among
epidem

into neat apposition with silkworm gut, arranged in the form of ordinary interrupted sutures, from the upper commissure to within two centimeters of the lower, so as to provide for the drainage of the space intervening between the urethra and outer integuments. This space was packed with sterilized gauze, a part of which was left protruding through the drainage aperture.

Upon reviving from the anæsthetic the patient seemed none the worse from the ordeal and ate heartily as if nothing unusual had occurred. There were some feeble attempts to strain during the succeeding three days after each act of micturation, but the expected and persistent harmful straining did not occur. The gauze packing was replaced daily for ten days, at which time the wound, which at no time showed any reaction, was almost healed. On the third day a part of the urethral sutures must have loosened as a small quantity of urine was voided through the drainage aperture, but as this was not repeated subsequently the full continuity of the urethra must have been promptly re-established. The patient was ready for work in less than four weeks.

The experiences of this case have shown (1) that very large cystic calculi can be removed through the urethra; (2) that the incision in the urethra should be made as near to the bladder as the anatomical constitution of the region permits; (3) that the removal should be effected not by forcible traction but by "peeling" the urethra forward over the calculus as far as it can be drawn backward; and (4) that the incision should be sutured and not left to close spontaneously.

The patient in question had been sent to the Chicago Veterinary College by Dr. Rowan, Belvidere, Ill., and the operation was performed by Drs. Hughes, White and Merillat, October 21, 1907.

A GRIM PASTURAGE.—So careless are the Chinese of hygiene and sanitary law that cattle are allowed to graze at will in the cemetery at Hankow, a temporary burying-place where the field is strewn with coffins of the victims of the recent cholera epidemic. The Chinese do not bury their dead at once, but they leave the coffin exposed to the open air. *The Illustrated London News* of February 29 contains a large picture of this grim pasture field in the outskirts of Hankow, with the cows grazing among the coffins of persons who have died of the cholera epidemic.

ABSTRACTS FROM EXCHANGES.

ENGLISH REVIEW.

BY PROF. A. LIAUTARD, M. D., V. M.

ŒSOPHAGOTOMY IN A DOG [*James Ford*].—Old English sheep dog is choking with a bone since several days. He presents all the usual symptoms and besides a probang caused great pain in being introduced, and arrives to a foreign body at the entrance of the chest. Anyhow it is felt outside by external manipulations. Immediate operation is decided. The animal is put to sleep, the parts disinfected, and an incision made through the skin right over the obstacle. The œsophagus is open and a lumbar vertebra is extracted with a great deal of difficulty and much strength. The wound was closed with cat gut, antiseptic cleanings prescribed and milk diet. For two or three days all went well, but on the third the dog broke loose and took his share of a heavy meal without showing any bad effects from it. No more care was paid to him and he made a perfect recovery.—(*Veterinary Record*.)

A CASE OF MALFORMATION [*Alex. Taylor, M.A., M.R.C. V.S.*].—The subject was a two-year-old colt and the owner thought he was suffering with staggers, as he was running in a field where much ergot was on the grass (staggers there is one of the diseases that are supposed to be due to ergot). The history of the case was that the animal had a peculiar gait, had looked dull since two or three weeks, but that previous to that he had been apparently well. The symptoms were not those of staggers. When standing the only abnormality was a backward bending of the knee more marked on the left than on the right leg. When moving the colt showed partial paralysis of the left side, with abduction on the left fore leg and adduction in the left hind. The action gave to the hindquarters a marked swaying movement. The want of power on the hind leg was not as marked as in the fore. The colt fed well and was in good condition. No positive diagnosis was made. The animal got

two purgative balls, and tonics with alterative were prescribed. No change took place. But after some time the symptoms grew worse and finally the horse was destroyed. Autopsy: Internal organs, both abdominal and thoracic, were found normal. Brain also. After removing the fore limbs it was noticed that the first rib, or the greater part of it, on the left side was wanting, being represented by a small piece of bone at each end, joined together by a fibrous band to which the intercostal and scalenus muscles were attached. The upper piece articulated only with the first thoracic vertebra and showed a considerable range of movement. There was a considerable amount of inflammatory exudate inside the vertebral canal at the roots of the brachial plexus. No microscopic examination was made for degenerations of the nerve tracts.—(*The Veterinary Record*.)

DISEASES OF THE EYE IN ANIMALS [*Henry Gray, M.R.C.V.S.*].—This is the title of a long article presented by the author to the meeting of the Midland Co. V. M. Association, which he passed in a concise way a general review of the pathology of the eye of animals. Taking, first, the subject of the eyelids, wounds, parasites, various affections of the glandular structure, growths, and malformations are considered and followed by the diseases and many conditions of the menbrana nictitans. The different forms of conjunctivitis, diseases of the cornea, of the ocular globe and its various membranes, irido-cyclitis, choroiditis, retinitis, cataract, etc., etc., are also examined by the author. Glaucoma, panophthalmitis, hydrophthalmos, mycrophthalmos, strabismus, shying, etc., all forming together the subject of a very long paper which is treated in a masterly way, is of great interest and is almost by itself a little vade mecum of ophthalmology.—(*Veterinary Record*.)

THE VICISSITUDES IN THE TREATMENT OF TETANUS [*Henry Thompson, M.R.C.V.*].—The subject of an article in which the author, after recalling the various forms of treatment that have come under his notice since he first entered the profession, some fifty years ago, and mentioning from the treatment by bleeding, doses of physic, newly-flayed sheepskin on the back of the patient, down to our days of hypodermic injections of antiserum, antitoxines, and tetanine, and having also resorted to chloroform, chloral, bromides, etc., etc., finally arrives to the relation of three cases where the results were always satisfactory.

The first case, a cart horse that had a sub-acute attack of lockjaw due to a wound in the forehead. Antiseptic dressing

of the wound with phenil water and tincture ferri (a favorite antiseptic with the author) and a coating of extract of belladonna. Then a good dose of physic, a wide, loose box, water at the disposal of the animal, hay tea, strained oatmeal, etc. The only medicine, one ounce of chloride of sodium in the water. Recovery in six weeks.

The second case was similar in nature, the result of a punctured wound of the foot. Same general treatment. This case also recovered and carried a foal the full period of gestation and foaled all right.

In the third case, also a sub-acute attack with cause unknown. Nothing was done for it except to keep the horse quiet, in the dark, with water at discretion. No medicine. Final recovery in seven weeks.

Numerous similar cases have already been recorded with similar results.—(Ed.) —(*Veterinary News*.)

FRENCH REVIEW.

BY PROF. A. LIAUTARD, M. D., V. M.

TREATMENT OF RECTAL PROLAPSUS IN DOG BY COLOPEXIA [*Mr. Douville*].—In the presence of the many failures that accompany almost every form of treatment with that disease, the writer feels that the operation of Colopexia is the only good way to relieve an animal, especially a small one. This operation consists in securing the terminal end of the colon to the abdominal wall. The abdomen is open, the colon is gently drawn forward, the prolapsus is thus reduced, and, with a few stitches passed through the middle and the external coats of the intestine and the peritoneal layer of the abdominal walls, the organ is immobilized.

A case out of many is then recorded. Six-year-old dog, quite big, has a double perineal hernia of long standing and suffers also with prolapsus of the rectum. He is constipated, of course; constantly makes violent efforts to relieve himself, and, as a consequence, all kinds of treatment has failed. At the last

attempt a foreign body had been detected in its abdomen, of which he had been relieved by injection of pilocarpine. It was a stone as big as a nut with a large stercoral mass. Finally colopexia was decided and performed. During the operation numerous tubercles were detected in the omentum and on the mesentery. The dog was kept a number of months after, having entirely recovered of his operation and having remained free of his prolapsus. When post-mortem was made a solid and perfect union was found existing at the point, where the stitches had been made.—(*Recueil de Med. Vet.*)

INJECTIONS OF ALKALOIDS IN THE TREATMENT OF INDIGESTION IN BOVINES [*Mr. Guichard*].—Three centigrams of muriate of pilocarpine, three of sulphate of eserine, four of bromhydrate of arecoline, all dissolved in five cubic centimeters of distilled water, is the prescription used by the author with great success for colics in horses, and now he recommends it also for cattle suffering with indigestion by overloaded alimentation, slight gastric disturbance, constipation, etc. The immediate effects are, however, different. While in horses the subcutaneous injection better be given before the administration of any drench, on the contrary with bovines a stimulating drink seems to aid the effects of the alkaloids.

Any how the effects differ. The reaction is much more violent and some times is such as to give some anxiety. The animal soon is covered with perspiration, breathes hard, falls down as a mass, rises suddenly, kicks his abdomen, and lays down as exhausted. These manifestations last for twenty or thirty minutes and then gases began to escape per rectum, followed by the expulsion of fœcal matters. Constipation that has resisted other means of treatment has never failed to give the writer good results. Five cubic centimeters are the dose for large animals. Four for those of middle size.—(*Repert. de Pol. Sanit. Veter.*)

TYPHLOITIS IN THE DOG [*Mr. A. Vidal*].—A Saint Germain hunting dog, aged 8 months, dies without previous morbid manifestations after having presented the following symptoms: Serous diarrhea, vomiting, pain on palpation of the abdomen, at a point situated below the cord of the flank, 3 or 4 centimeters back of the hypochondriac region. There is soon arrest of defecation, vomiting becomes muco-bilious, very rapid emaciation of the whole body. Autopsy: Digestive canal empty and normal in its characters. Only the cœcum has a lead color

and is easily torn. It contains a small quantity of soft fœcal matter, but no foreign bodies or parasites. The mucous membrane is purplish and now and then ulcerated. The liver is enlarged and the abdominal and pericardial secretions rather in greater quantity.

The author asks if the symptoms and the lesions with the sudden appearance of the disease, its march and severity, do not altogether suggest the idea of a comparison with the typhilitis of man.—(*Revue Vétérinaire.*)

FOREIGN BODY IN THE BILIARY BLADDER [*J. Kowalesky*].—In the biliary bladder of an aged steer prepared at the slaughter-house of Taschkent, Russia, the author has found an iron nail. It was ten centimeters and a half long with five millimeters in thickness. One of its extremities was larger, probably the head. Quadrangular in shape, it was crooked in its middle and rested in the biliary vesicle in a vertical position with its point on the wall. There was no lesion on the mucous membrane and the bile appeared perfectly normal. The mucous of the duodenal portion of the abomasum and the origin of the duodenum were normal and free from any lesion. The nail could have easily passed through the opening of the cystic canal and also run through the entire length of the canal.—(*Hygiène de la viande et du lait.*)

TUBERCULOUS PERICARDITIS [*Mr. E. Barrat*].—Since a few weeks this cow has lost flesh and now she refuses her food. She has two swellings of œdematous nature, one in the sub-glossal region and the other on the dew lap. The jugular veins are swollen and prominent and there is venous pulse. In auscultating, the bruits of the heart are plainly heard and their number much increased after only a few steps of walking. There is nothing wrong towards the lungs. No effusion can be detected. Breathing is relatively normal. A diagnosis of traumatic pericarditis was made, and instruction to have the animal killed, given. At the post-mortem, on opening the thoracic cavity, a tuberculous mass was found adhering to the external surface of the pericardium and also on the left pleura only. This mass is 20 centim. thick in its front part, 15 on the left side and 10 on the right. The heart is pushed backwards and is oblique from forwards backwards and from upwards downwards. The internal face of the pericardium is perfectly smooth. There is endocarditis. Three or four centers of tuberculosis exist in the lungs. One bronchial gland is also tuberculous. The tuber-

culous mass weighed 14 kilogs. The diagnosis was rendered specially difficult. As there was considerable fever, the use of tuberculin was unnecessary.—(*Rev. Gener. de Med. Veter.*)

SUDDEN DEATH BY ASPHYXIA DUE TO THE ENTRANCE OF SAND INTO THE LUNGS [*Mr. Inguineau*].—During military manœuvres, the crossing of a ford gave an opportunity to have the horses quench their thirst. One of them, irritated because of being kept back for a while, drank when his turn arrived with such avidity that the man who was riding him was unable to make him stop or raise his head from the water for one moment. A few seconds after he fell down and died. At the post-mortem, the lungs were found three times their normal size and excessively congested. Sections made through them showed that the bronchia and their subdivisions were filled with sand and gravel. At three places in the right lung there were hemorrhagic spots made by the sharp edges of some little stones. All the organs were found healthy. It was supposed that resisting the efforts of the rider to draw him out of the water, the horse plunged his head to the bottom of the ford and absorbed per nostrils water, sand and gravel.—(*Rec. Hygie. Mede. Veterin. Militaire, R. G. M. V.*)

PARACENTHESIS OF SYNOVIAL CAVITIES AND LOCAL INJECTIONS OF SALICYLATE OF SODA IN THE TREATMENT OF RHEUMATOID SYNOVITIS [*Mr. Chenot*].—After careful aseptic preparations, the author introduced a small trocar through the most prominent point of a tendinous or articular synovitis. After removal of the contents, the cavity was washed with warm water (40°), distilled twice, filtrated and then injected with the same trocar left in place. The wound was closed with saloled colodion. In two cases this washing, with more or less compressive wadding dressing and kept from 3 to 5 weeks, has been sufficient to obtain a radical recovery. These synovitis were existing between 10 and 13 months.

Encouraged by this result, the author tried local injections of salicylate of soda, at 1/5 and then 1/10, to treat various synovitis of rheumatoid nature. The first was an infectious synovitis of the fetlock of 18 months' standing, giving rise to severe lameness even in walking. 50 centigramms of salicylate dissolved in 7½ gramms of warm water, redistilled and filtrated, were injected. Thick wadding dressing applied. Great pain at first. Lameness entirely gone the third day. Fifteen days later lameness has returned. New injection of 1 gramm of

salicylate in 10 of water. This was again followed with great pain at first, but after thirty-six hours it passed off and radical and permanent recovery was the result. The author has resorted to this same treatment in three other cases.—(*Rec. Hygie. Medec. Veterin. Militaire, R. G. M. V.*)

ITALIAN REVIEW.

By Prof. A. LIAUTARD, M. D., V. M.

TUBULAR EPITHELIOMA OF THE STOMACH AND OF THE INTESTINES IN A HEN [*P. Zannini*].—This condition was observed in a hen that had died from starvation. Since some time the owner had noticed that the fowl, although she showed good appetite, was gradually losing flesh. She was less active, weak, and one day appeared suffering with severe dyspnea and having the throat much swollen and hard. Death took place very rapidly. At the autopsy the glandular stomach and the gizzard were found the seat of large neoplasms, which extended into the intestines. The gastric ventricle being changed into a large mass, as big as a mandarine orange, very hard, with bosselated surface and surrounded with many others of various sizes. These neoplasms invaded the cavities of the organs and prevented the passage of the food from the throat down the oesophagus. The growth that existed in the free portion of the intestine was as big as a hen's egg and was firmly adherent to the terminal portion of the organ. The microscopic examination of various sections of these growths revealed their nature of cylindrical tubular epithelioma. It appears that veterinary literature on this disease shows that it is not frequently observed among fowls.—(*La Clinica Veterin.*)

INTOXICATION OF CATTLE DUE TO EATING SINAPIS NIGRA [*Dr. Borella Alele*].—This is the relation of several observations made at a time when on account of general long, dry season the recolt of hay had been poor and cattle received a poorer quality of forage. There are three observations relating to what took place in connection with such feeding, and in which

deaths occurred in comparatively large number, all cattle that had partaken of the plant were more or less sick. In one of the three observations where six steers eat mustard two died. In another, three animals succumbed out of seventy having been sick, and in a third three also died out of a herd of forty cows. During the time that the animals were sick they had colics, refusing food and drink, showing also first signs of indigestion and later on indications of gastro-enteritis. At the post-mortems that were made the liver was found indurated and pale in color. The spleen and kidneys seemed rather normal, the various compartments of the stomach contained greenish mass, pultaceous in aspect and mixed with mucosities. In one of them between 30 and 35 litres of liquid were found in the abdominal cavity. The animals that were sick were treated principally with milk diet only and recovered.—(*La Clin. Veterin.*)

UPON THE TREATMENT OF SPAVIN [*Dr. Gino Giovanelli*].—For the writer of all the forms of treatment that are recommended against the tarso-metatarsal osteo-arthritis, none has proved really efficacious, whether it be by blistering, firing, section of the tendon of the flexor metatarsi muscle or the operation of Dickerhoff. This last indeed has given in his hands the most disastrous results in one case where he resorted to it. On this account Dr. G. G. uses now only a method which has proved most satisfactory. Out of 36 cases, recovery, that is, the removal of the lameness, took place in 20; in 6 the results were negative, and 4 cases were lost sight of after treatment being applied. This consists in the division of the internal saphena nerve in the interior third of its course and more specially where the two roots of the internal saphena vein are united in one branch on the internal face of the tibia and before it reaches the thigh. At this point the internal saphena nerve, after being divided into two branches, running one in front and the other behind the vein, accompany it as far as the anterior face of the hock. Those nerves are readily exposed by a simple incision four or five centimeters long made through the skin only. When exposed, they are easily separated from the vein and divided. Simple suture is followed by first intention cicatrization. A few points of deep, penetrating firing complete the treatment.—(*Il Nuovo Ercolani*.)

ASCITIS IN A DOG [*Dr. Giuseppe Sivieri*].—A six-year-old watch dog had slight tympanitis, due to simple gastro-enteritis, which was improved by proper treatment. After a short time

the dog was again sick with severe constipation. Podophilline was prescribed and given in milk. Some improvement was manifested, but after a few days the writer was called again because the dog was getting a large belly. Indeed, he was sick. His respiration was difficult and frequent, he was unable to lay down, his abdomen was enlarged and pendulous and fluid was readily detected by manipulation and by percussion. Ascitis was evidently present. An exploring needle was plunged into the abdomen and 10 litres of perfect, clear fluid were removed. The treatment by omentopexia was suggested, but objected to by the owner, and, instead, one prescribed which was thought might prove only palliative. This consisted in the administration of Iodide of Sodium in gradually increasing doses with paracentesis, whenever it seemed necessary. This operation was performed eight times; at first about every eleventh day; then further apart, and finally after five months of attendance, the last puncture leaving no more fluid to escape, the treatment was stopped. Since that day the dog, which had supported the treatment very bravely, had become reconciled with the punctures to the point of laying down of himself when the doctor came to operate, soon began to resume his general aspect and grew fat.—(*Il Nuovo Ercolani*.)

OBSTRUCTION OF THE INTESTINES IN A STEER [*Dr. Giuseppe Sivieri*].—A very handsome steer, prepared for an exhibition of fat animals, presented symptoms of indigestion for which purgative and oily rectal injections were prescribed. Three days later the writer was called in a hurry and found the animal much depressed, with a temperature of 36° only. Rectal examination revealed nothing abnormal, the last portion of the intestine being found empty. Recalling previous similar cases, the author made a diagnosis of intestinal obstruction and advised immediate slaughter which was carried out at once. At the dressing of the carcass extensive peritonitis was exposed. The small intestine was the seat of a longitudinal laceration measuring four centimeters, through which a fermenting small potato had made its way into the abdominal cavity and given rise to the peritonitis. It seems that in the diet given to animals which are fattened for market purpose it is not uncommon to see them receive in their ration, potatoes mixed with other farinaceous food.—(*Il Nuovo Ercolani*.)

ENDOMETRITIS AND PYLONEPHRITIS IN A MILCH COW [*Dr. Giuseppe Sivieri*].—A cow of great value was recently bought,

and refused her food. A few days later she aborted a three months' foetus. Treated with disinfecting irrigations, she soon returned to her normal health, but with a capricious appetite. Coming in season, she was taken to the bull and covered. Her general condition remained about the same, but two months later she again aborted. Her symptoms, however, this time were more serious. She had violent colics and high fever. After a few days she had vaginal discharge, muco-purulent and very offensive. Diagnosis of endometritis was made. Placed under treatment, tonics and antiseptics. The cow improved and soon again she became in heat, but, fearing another abortion, advice was given to have her slaughtered, to which, on account of her great value, the owner objected. A consultation was held. Same diagnosis made and same treatment was prescribed with some little changes in the use of the antiseptic already employed, but, notwithstanding great care and attention, the animal had to be sold to the butcher. Besides lesions of endometritis that were found, the right kidney proved to be considerably enlarged. In cutting through it a large collection of pus was discovered in the pelvis of the organ with extensive alteration in the parenchymatous structure. Although this last condition had escaped the attention at the time the cow was examined first, it is most likely probable that the pyelonephritis was a secondary infectious process due to the endometritis.—(*Il Nuovo Ercolani*.)

GERMAN REVIEW.

By J. P. O'LEARY, V. M. D., Bureau of Animal Industry, Buffalo, N. Y.

THE ETIOLOGY AND PATHOGENESIS OF INDIGESTION WITH COLICKY SYMPTOMS [*N. C. Cuny*].—Although indigestion of the stomach and intestines has been described and classified to some extent, Cuny maintains that it is impossible in the present status of science to designate any particular cause for these diseases. The stomach and intestines are intimately connected with one another, supplied by the same system of nerves and anatomically and physiologically so closely associated that both may be influenced by the same cause. This intimate relationship led

Cuny to believe that in all cases of indigestion be it directly or reflex the stomach and intestines are affected during the course of the disease. The clinical distinction depends entirely upon the time at which the malady set in, furthermore upon the various stages of tympany and the quality of the feed at hand. Thus the disease exhibits peculiar characteristics which alone justify its clinical distinction as we have already mentioned. In fact, the etiology remains a unity even when we have to deal with certain organic and hypothetical influences, such as the partial obstruction of any part of the intestinal tract. We cannot understand how the stomach can perform its functions with precision when any part of the intestines is disordered, partly or wholly paralyzed. This functional independence surely does not exist during the whole course of the disease, it can only be transitory, and we conclude from this, apart from the presence of certain symptoms, that indigestion is uniform in its causes as well as in its effects.

What are these causes? This question cannot be answered briefly; their number is legion. We will attempt to enumerate the principal ones, and for the purpose of facilitating their study we arrange them in the following synoptical order: Digestion is the result of a series of mechanical, physical and chemical processes which take place in the interior of the organism. These phenomena whose course is dependent on exterior influences have for their purpose the conversion of food, that is to say, as a rule, insoluble substances into absorbable nutritive substances. There are, therefore, two groups of causes: one is of exterior origin, the other interior. Under the first, we consider those which result from weather, feed and work. Under the second, the individual, organic, toxic, and microbic.

Temperature, great heat influences the distribution of the blood, makes the stomach anæmic, decreases the secretions, produces atony of the digestive tract and is a frequent cause of indigestion (Cadéac). Numerous observations support this view. Chauveau is of the opinion that among the numerous causes of colic one deserves especial mention, namely, the influence of temperature. In the large stables we often note numerous cases of colics which are associated with oppressive sultriness and excessive humid temperatures. He also believes that atmospheric conditions are a prime factor in the origin of colics. Alex holds the same opinion and further maintains that the temperature of the drinking water is one of the chief sources

of colic. As a result of these combined opinions with the exterior temperature, the water in the winter being too cold and in the summer too warm, all suitable conditions to exert a harmful influence on the peristaltic action of the intestinal canal through its nerve supply. Also intense heat accompanied by high electric tension. During the summer the number of colic cases increase. Lavalard lays particular stress upon the influence of the season. He says that the mortality increases from January to May, remains very high during the summer and sometimes during September and October. There is a universal agreement on these points. From this we may infer that indigestion is more frequent and severe in the summer and during sultry weather. Still, we cannot deny that in very cold weather colics are not infrequent. They may become a cause in a reflex manner by interrupting the physiological functions of the stomach and intestinal canal.

Feeding.—We have to distinguish between solid foodstuffs and liquids. Drinking water too hot or too cold produces the same deleterious effect as the atmosphere. The danger from fluids at extreme temperatures is much greater when horses are less frequently watered (Alex). Particularly in the case of army horses this is a very frequent cause (the writer). Jacoulet refers to the irregularities practiced in the French army regarding the watering of horses. The animals are frequently watered on empty stomachs and in many cases rarely watered. We should insist on having a continuous supply of water in stables so arranged that horses could drink *ad libitum*. The writer desires to add, that recently in the larger private stables the introduction of automatic watering contrivances have been installed and are becoming more common. Formerly great difficulty was experienced in the construction of an automatic watering apparatus in order to be durable and work satisfactorily at all times. At present this is no longer the case. The watering apparatus which was invented by J. Richter, of Leissnig, in Sa., worked admirably. The device was installed temporarily for a test in a few military stables and pronounced most satisfactory. Nevertheless, its adoption in such stables met with stern opposition from military sources as will be seen from the contents of two letters received by the above firm. They read as follows: Dresden-n-den 3. Mai, 1906. Your automatic watering device which was installed in the stables of the 2d Bat., 4th Field Artillery, Reg. No. 48, in Dresden, proved practical and

satisfactory. Though fully recognizing its many advantages, the military authorities are opposed to its use in army stables on the ground that while it has a benign influence on the general health of the horse, it produces bad habits, in fact, pampers the cavalry horse, those habits being readily perceptible in the field. The minister of war desires to convey to you his recognition of the merits of the automatic watering device invented by you. The same is probably more adaptable to private rather than military stables.—War Department. Berlin, W. 66 den 21. Feb., 1906. In reply to your inquiry of the 18th Jan., 1906. The test automatic watering device installed in the stables of the 3d Squad, 1st Dragoon Guards Reg., Great Britain, operated admirably. The minor disorders attending its use at first were rapidly and easily remedied. While it is admitted that the apparatus in question fulfilled its purpose by naturally and agreeably allaying the thirst, consequently exerting a salutary influence on the general health of the horse. For private stables this device might be of the greatest service. But its introduction in army stables cannot be considered, as stringent military rules prohibit its use.—War Dept.

Morizot takes up this question more minutely. He states that during the monoeuvres he had treated horses affected with colics which seemed to recover immediately when given fresh water to drink. In Germany they adhere to the opposite opinion, that horses suffering from colics as a rule refuse to drink, and that when they show an inclination for water it is an unmistakable sign of recovery (Goldbeck). Morizot also states that the number of colic cases are more frequent on Sunday and from Sunday night to Monday, because the animals are not sufficiently watered, or perhaps not at all. Rousseau likewise criticizes this method of watering; he maintains that in order to avoid colics the horse must be watered frequently and especially avoided when the stomach is empty. Still another source of colic is the bad quality of the water. Aside from these waters which contain pathogenic organisms and direct poisons, many waters through their chemical composition act injuriously on the stomach. Calcareous waters frequently interrupt digestion by neutralizing the hydrochloric acid secreted by the stomach. Food is an important factor in these questions. Many horses show symptoms of colic after eating indigestible substances as earth and sand. Others again get nutritious foods, but as a consequence of overeating are exposed to the same danger. In the

cas
son
Lib
app
of
com
leav
of
Vet
ing
indi
ly in
corn
food
sess
frequ
be so
to an
feed.
horse
disea
to bri
pose
excee
blame
conva
ther,
greate
is dist
appropri
ly pres
tion o
its dig
Int
the sar
compl
ness an
in the
this po
turbanc
during
benign

case of millers' horses, which, as a rule, are given too much bran, sometimes this feed produces calculi which causes indigestion. Likewise food of poor quality plays a role, although this is not apparent in all cases. No one will question the injurious effect of dusty hay, and hay which has been badly cured, also that which contains much woody fibre and hay whose botanical composition leaves much to be desired. Caulton Reek's article, "Tympanites of the Stomach of the Horse: Diagnosis and Treatment," *The Vet. Record*, 1903, page 555, accuses certain foodstuffs of having a similar action as is frequent in oxen. According to Reek, indigestion of the stomach with tympanites arises very frequently in the horse after eating young and juicy plants such as clover, corn in the stalk, Lucerne, vetches, also cooked and mashed foods which had undergone fermentation when moistened possess the same peculiarities. The manner of feeding is the most frequent cause of indigestion. Another cause, Alex says, must be sought for in the absolute quantity and in the sudden change to an excessive quantity rather than in the nature and kind of feed. In fact, we see frequently in the country where young horses which are overfed show severe stomach and intestinal diseases, and although it is difficult and we might say impossible to bring about artificial indigestion in those horses which on purpose are given dry feed in excess, it is nevertheless a fact that exceeding the feed ration produces serious results. Lavelard blames particularly the increased rations in the case of tired and convalescing horses. Jacoulet is of the same opinion. Further, he condemns the economy practiced in feeding during the greater part of the year, and at the time of manoeuvring feed is distributed in a disproportionate manner to the animals (very appropriate, Goldbeck). The cribber and windsucker frequently present intestinal disturbances as a result of the great distention of the intestinal canal; it can neither contract nor secrete its digestive juices with its accustomed energy (Cadéac).

Influence of Work.—Here the greatest antithesis leads to the same result. Apart from the injurious role which work accomplishes directly after feeding (Alex), we can say that idleness and overexertion affect the functions of the digestive tract in the same manner. Videlier has recently called attention to this point. According to him a large number of intestinal disturbances are caused by lack of work and unsanitary conditions during Sunday. He is also of opinion that work exercises a benign influence on the digestive tract and that rest alone in

the case of troop horses explains the large number of colic cases which are noticed during the time between the discharge of the old troopers and the arrival of the recruits. In order to avoid this cause, the horse should never be allowed to remain at rest in the stall one whole day. At least 2 hours' exercise should be given daily. That severe exertion plays an important part is well known. According to Lavelard, it is one of the chief causes of colic; it creates nervous exhaustion, the result of which is paresis, or total paralysis of a part or the whole of the intestinal canal.

Individual influences.—These are the most important, but unfortunately we do not wholly understand their mechanism. There are individuals, some of which even under the same environments are predisposed to indigestion, while others are insusceptible. There are even animals which under the most suitable hygienic conditions are prone to indigestion (Benjamin). In order to explain this fact, we must use the vague expression, "Predisposition." We must not forget that with age its influence increases.

Functional and organic influences.—Greediness hinders many animals from digesting their food properly. These animals frequently show symptoms of indigestion. The same condition is observed in horses with irregular teeth. Beutel frequently expressed his opinion on this point by means of numerous statistics at hand. He proved that bad and irregular teeth are a prominent factor in the etiology of colics. We can also refer to the success which was attained in the prophylaxis of colics by the systematic treatment of the teeth. Old horses are more subject to indigestion because the stomach and intestines are debilitated and consequently do not contract sufficiently to accomplish the mixing of the food. In addition to this, in age the salivary secretions are diminished and under those combined circumstances the food accumulates in the torpid alimentary canal (Cadéac).

Obstructions, which have their seat in the intestinal tract, such as constrictions, tumors and so on, produce a disturbance of the functions, primarily resulting in indigestion. In connection with this, we must cite the case of aneurisms (verminous) which, when frequent, produce circulatory disturbances. Thrombi obstruct the flow of nutritive blood to certain parts of the intestinal tract, hence these parts become paralyzed and are

the seat of stasis (Cadéac). As a result of this, Mègnin explains the frequency of intestinal disorders in the cavalry horse.

Toxic and Microbic influences.—Of all the new theories advanced these alone are of particular interest, while all the others have been known for some time. Darras has established the following theories: That colics arise from the absorption of those poisons which the liver cannot destroy. He implies that at most of the autopsies held on horses which died from colics the lesions found were mostly of a secondary nature. He found that in all cases the liver was friable and degenerated. The excessive muscular exertions act directly upon the liver, through its glyco-genic function, its antitoxic power is lowered, the toxines penetrate the gland, reach the central nervous system and produce a digestive atony, and, as a consequence, indigestion. He thought it probable that the colics of the horse are a more or less severe infection of the organism by the poisons of the intestinal canal and that this infection is favored by the diseased condition of the liver which lowers its functional activity and particularly its antitoxic action. Benjamin maintains that this theory is well worthy of consideration. He recommends that from this date onward a careful examination be made of the liver at autopsies on horses which have died from colics. In practice, owing to the difficulty in making a careful autopsy, as a general rule, we are satisfied to look for those causes which have produced death. Yet we trouble ourselves very little concerning the various pathological changes which are still to be found and which may lead to the suspicion of the existence of a toxic or infectious disease. There remains for us to investigate one final theory which bears a similarity to the preceding and to accept a microbic element as the genesis of indigestion. Dupas had observed colics in horses living in the open which had assumed an infectious aspect. He maintains that this supports the hypothesis that bacteria are the cause of intestinal disturbances. Still, before this publication, Dassonville investigated the cause of death in certain cases in ruptures of the stomach and intestines. According to his opinion, the cause of this was due to two different effects, one an internal centrifugal force, the other an external centropetal force of the organism itself. The former is produced in most cases by a collection of gas in the intestinal tube. The gas arises from the fermentation of the food, that is to say, from the influences of living elements acting upon a fermentable mess. We then from necessity infer

that microbes are the chief causes of intestinal disorders. Dasonville had not been satisfied with thoretic deductions. He aimed to experiment in vitrio with the flora of the digestive canal and to determine which species were at fault. He found a vibron which liquefied gelatine, developed a great deal of hydrogen and methane. The point in question was, whether or not he had discovered the microbe of indigestion. We doubt it very much, as the author could not produce the disease with the aid of his cultures, which should have been necessary to support his theory. Besides the presence of bacteria in the intestinal canal, either those which liquefy gelatine, or those that do not is not at all surprising. These microbes are always present because they form gas during the presence of digestion. Their absence would be much more surprising and certainly should claim our immediate attention, yet we know that digestion is aided by the presence of micro-organisms, in which one directly antagonizes the other and effects incessant transformations of the digestive contents. The absence of these bacteria may be rather a source of danger and even completely interrupt the normal evolution of this physiological metomorphosis.

Pathogenesis.—This question is easily presented, but difficult and perhaps not at all solvable. The microbic influence would necessitate a special pathogenesis. We agree concerning the effect of a disturbance in the phenomena of secretion and motive power. Its retardation or suppression in each case effects a change in the mechanism of the stomach and intestines. The functions are impaired, the normal regularity suppressed. There must exist between both a certain connection. This connection takes place through the nervous system. All influences which produces these transitory disturbances may become a cause of the interruption of the functions of the stomach and intestines. As yet we lack the necessary experimental proofs for those ideas.—[*Deutsche Tierarz Wochenschrift*, No. 40.]

THE KANSAS CITY VETERINARY COLLEGE.—This excellent school has just completed the most successful year of its history. The commencement exercises were held in the New Casino on Thursday evening, March 26th, where the last sessions of the A. V. M. A. were held. The degree of D. V. S. was conferred upon one hundred and eleven gentlemen, two of whom were post-graduates.

OBITUARY.

ROSCOE R. BELL, D. V. S.

Resolutions adopted by the Illinois State Veterinary
Medical Association.

Whereas, It has seemed best to the ALL-WISE CREATOR to permit one of the best beloved veterinarians of this country to be removed from our midst, by the silent hand of death; and

Whereas, We recognized in our brother the sterling worth of a man who was energetic and untiring in his efforts to do his duty, and especially to advance the cause of Veterinary Science not only in America but for all countries; and,

Whereas, His efforts, as the editor of the leading veterinary journal of the Western Hemisphere, he had been largely instrumental, if not responsible, for making it at least the equal of any other such publication, and through its monthly visits we have learned of the scope of his unbiased intellect. Even those brother practitioners of Illinois, having little or no acquaintance personally with him, have both consciously and unconsciously benefited incalculably by his editorial and journalistic ability; and,

Whereas, We of the Middle West feel keenly the loss of this brother veterinarian, educator, writer and friend, Dr. Roscoe R. Bell, therefore, be it

Resolved, That we express our appreciation of this most excellent man and fellow-practitioner in this journal though in a faint way. The profession has lost more than a friend. It has suffered an irreparable loss in the death of this conscientious educator and untiring, genial and brilliant collaborator in veterinary medical research, and be it further

Resolved, That we extend our heartfelt sympathy to the family of the deceased. Realizing keenly the loss of his friendship and his help at this distant point, from his daily activities, we can faintly compute the actual deprivation to those not only in his own family, but to that large circle of friends and co-workers who have during many years of intimate relationship, professionally and otherwise, learned to love, respect and depend upon him the more for his untiring devotion to the work

for which he was most admirably fitted. Our sympathy extends, therefore, to the Editorial Staff of the AMERICAN VETERINARY REVIEW, whom we know feels most of all the loss to the profession.

Resolved, That a copy of these resolutions be sent to the family of the late Dr. Roscoe R. Bell and also to the AMERICAN VETERINARY REVIEW.

Signed for the Illinois State Veterinary Medical Association by

C. C. MILLS, President,
C. G. GLENDINNING, Vice-President,
N. I. STRINGER, Secretary.

March 14, 1908.

SYMPATHY FROM OHIO.

CANTON, OHIO, March 17, 1908.

Editors AMERICAN VETERINARY REVIEW:

DEAR SIRs—We, as a state association, deeply feel the loss of our grand and good brother, Dr. Roscoe R. Bell. To you, and the bereaved family, we extend our deepest and sincere sympathy.

OHIO STATE VETERINARY MEDICAL ASSOCIATION,
C. B. FREDERICK, *President*.

RESOLUTIONS ON THE DEATH OF ROSCOE R. BELL, LATE PRESIDENT, ADOPTED BY THE VETERINARY MEDICAL ASSOCIATION OF NEW YORK CITY.

At a meeting of the above association, held March 4th, 1908, the President appointed a committee of three to draw up suitable resolutions on the death of our late President, Dr. Roscoe R. Bell.

"WHEREAS, It is with profound sadness that we learn of the death of Dr. Roscoe R. Bell, a member of this society, with

whom for many years we have been associated. To know him was a pleasure, and to be his friend a privilege—active in the discharge of duty, cordial in manner, capable in speech, he was a man held in the highest respect and esteem by the general public as well as by his professional brethren. To realize that his voice is silent in death crushes us by the weight of our misfortune. Therefore be it

Resolved, That a page be set apart in the minute book of this association to his memory and that these resolutions be inscribed thereon, and that a copy be sent to the *AMERICAN VETERINARY REVIEW* for publication, and, be it further

Resolved, That we extend to Dr. Bell's family our heartfelt sympathy in their bereavement.

(Signed) J. L. ROBERTSON,
E. B. ACKERMAN,
W. REID BLAIR.

"No veterinarian, veterinary student or intending veterinary student should be without the *AMERICAN VETERINARY REVIEW*. Last month an article was written that was as good as ten lectures."—(*San Francisco Veterinary College Bulletin*.)

INSTITUTE OF EXPERIMENTAL MEDICINE IN BRAZIL.—The Brazilian Government has voted funds for the establishment of an experimental pathological institute at Manguinhos, intended for the study of the parasitic and infectious diseases of man, animals and plants, and for the preparation of serums.—(*Science*.)

A TEST CASE.—"I'm a 'beauty doctor,'" announced the stranger with the hand satchel full of cosmetics and massage machines. "Do you think I could get any practice around here?"

"Yeou make ugly things pretty, don't yeou?" drawled the old farmer in the speckled shirt.

"That's my business, sir."

"Wall, if yeou'll go down back of my barn yeou'll find an old slate colored cow with one eye and one horn, and wrinkles like canals all over her face. She's the ugliest cow in seven states, and if yeou can make her pretty I'll agree that yeou be a 'beauty doctor' an' give yeou a dollar."—(*Chicago News*.)

SOCIETY MEETINGS.

IOWA STATE VETERINARY ASSOCIATION.

The twentieth annual meeting of this association was held at the Commercial Club Rooms, Cedar Rapids, Iowa, January 28-29, 1908, with President Griffith in the chair. His address dealt with timely topics and was as follows:

"Members of the Iowa State Veterinary Association and Visitors:

"As we have a good program before us, I will not torture you with a long address; I am glad to see such a large number of veterinarians present. It certainly looks encouraging for the profession. I think I can truthfully say that there never was a time in the history of veterinary science, that the veterinarian should be more alive to the sense of their duty; the public in general are reaping the benefits of the progress made by the profession more now than ever before, the veterinary practitioner has proven his ability to treat the diseases of our domestic animals, and recommend the most approved methods of stamping out contagious diseases. The veterinary surgeon has his place, on the board of health in many localities, and has proven himself worthy of the confidence entrusted to him, and the efficient manner of meat inspection carried out by the Government has accomplished much towards promoting the health of our people, and added greatly to our foreign exportation of meats; however no particular interest or means have been employed by our state for the protection of our own people or the live stock interests, meats from diseased animals that have been slaughtered can be, and are sold on our markets. Why are we not as good as the foreigner and have healthy meat to eat? The Secretary of Agriculture, the Honorable James Wilson, with Dr. Melvin and all his staff of veterinarians and meat inspectors are doing a work that should receive the commendation and co-operation of all good citizens. In Iowa, we have a veterinary law, and I sometimes wonder if it is very much benefit to the profession, and the public in general. It certainly is a snap for the empiric as they nearly all of them have a license to practice, issued by the state au-

thorities, and which the public is led to believe is a diploma, and the better to convey my idea on this subject, I will relate one of the many cases that have come under my own observation. In an adjoining county to this, a farmer bought a western horse, and later discovered that he was discharging at the nose and decided that something was wrong. He went to town to employ the services of a veterinary surgeon. He was directed to one and when he saw who it was he was surprised, and said "Are you a veterinary surgeon?" as he had seen this so-called "doctor" shearing sheep, trading horses, and supposed him to be an all-around "jack of all trades." The "doctor" pointed to his state certificate which was hanging in a conspicuous place, with the remark, "I passed the best examination of any veterinary in the state." The farmer then concluded that the man must certainly be qualified with those credentials. He employed him, the "doctor" looked wise, and after carefully examining the horse informed the owner "that his horse had a new kind of distemper," and that he was just the man that could cure it; as a result other horses contracted the disease, and three mules died. The State Veterinarian was notified, and I was sent to investigate; after a careful examination and testing with mallein, the animals were pronounced glandered and ten head were killed. All this loss was caused by the ignorance of this so-called veterinary surgeon holding a state certificate, and who had treated these horses and mules for two years with considerable profit to himself, and many of you can recall cases of similar nature that have come under your own observation. I only want to illustrate to you the misplaced confidence that arises from these fellows holding a state certificate, which they claim is a diploma. I think it should be put on their license in large letters why they are allowed to practice, and their qualifications. There are some non-graduates practicing that are gentlemen and have a fair knowledge of disease and treatment; but I refer to the rank and file of them who brag about their forty years' practice and their success in treating water bound, hollow horn, wolf in the tail, who give chicken intestines for bots, taken from a black feathered chicken, and the whole list of obscure diseases are treated along similar lines. I used to wonder where these diseases originated from, but received some light on the subject a few years ago. Our county coroner was called to a case of an old fellow committing suicide

by cutting his throat, a book was found on his person telling about those aforesaid diseases and their prognosis and treatment. This book was published about 150 years ago and which had been passed down from one generation to another. It is to be supposed that this self-made "doctor" when he sat on the brow of the hill overlooking our beautiful city on a nice June morning and viewed God's handiwork there came to him a realization of his misspent life, how he had deceived the people all these years, and had charged them when he had done them no good, torturing the poor dumb animals in his ignorance, with doses of medicine which he did not know the action of, and realizing that his days of deception were over, he took his old dirty jack knife, and cut his throat, saying, "If you take nothing, nothing remains." A state law is a good thing and has done much to encourage veterinary education; it has been the topic of conversation for the past decade. I think every veterinary surgeon should encourage a higher education and if every veterinary surgeon would forget about the school from which he graduated long enough to consider the other veterinary colleges, and if in his opinion there was a more thorough school or college than his own, and would advise the prospective students to the best of his belief and use his influence for a higher preliminary education; at least he should be a graduate from a reputable high school before entering a veterinary college. I think a college should be very careful in admitting students, if they are going into the profession simply to make easy money they should never start. Select only those that would be an honor to the profession, another practice that should be discontinued in my judgment is this: if a student starts at a certain college he should be compelled to finish at the same college; at present if a student fails to pass his examinations at one college, he will find agents from another college ready to welcome him. If he wants to put in another year after he graduates at some other college it should be commended; it is somewhat amusing to hear some graduates brag about the merits of their respective colleges, and those fellows who graduated ten or twenty years ago are has beens. The better way, in my judgment, to judge, is by the success of the practitioner; it is quite often the case when a student graduates he considers he knows it all, need read no more and puts his books away, when in reality he has just commenced his career; if he does

not read and study and keep abreast of the times he will certainly be a failure. I wish to report a little state work that I have been doing the past year. The local packing house has been tagging hogs brought in by the farmers in this locality and when they have found tuberculosis in the hogs have notified the State Veterinarian, who has ordered me to test the cattle on the farms where the tuberculous hogs came from. I have tested about fifteen herds under those conditions and have found tuberculosis in the cattle in every instance, and this has proved to me a good method to locate tuberculous cattle. To eradicate tuberculosis under the existing laws is impossible, as many of our fine stock breeders refuse to test their cattle and continue to sell them for breeding purposes and spread the disease throughout the state. I know one man who bought a thoroughbred cow less than two years ago, and put her in with his herd; the cow became emaciated and died; I have since tested his cattle and out of fifty head found twenty-three diseased, most of them in the first stages of the disease. This same herd was tested two years ago and found free from disease. The buying of this one cow, in my opinion, has caused a loss of over two thousand dollars to this progressive young farmer. It would seem to me that a law compelling all cattle that are offered for sale for breeding purposes should be accompanied by a certificate certifying that they had been tested for tuberculosis and found free from disease would be a partial solution of the problem. I would advise all breeders to buy and sell by the tuberculin test; tuberculosis is spreading fast and Iowa appears to have more than her share, and the quicker some means are adopted for stamping out this disease the better it will be for man and beast. The Legislature passes all kinds of laws for the protection of game, and the eradication of noxious weeds which is all right and proper, but the principal source of revenue in an agricultural state like this is the beef, pork and dairy products which have been sadly neglected.

"In conclusion, I think the veterinarians throughout the state have had a prosperous year; there is a good demand for qualified veterinarians, both as practitioners and in the Government service, and we should feel proud that we are veterinary surgeons when our work is caring for poor dumb animals and the inspection of meats and milk for the millions of people who depend on our skill and honor. I am sure we are

serving our Creator in making this world better in which we live."

Address of welcome was made by Mr. Roland Schaver, Secretary of Cedar Rapids Commercial Club, and was full of good thoughts, of fellowship and of the future of the profession as reviewed by a layman. He extended a hearty welcome to the association.

Response of thanks on behalf of the association was tendered by Dr. S. H. Bauman, member of the last Legislature from Van Buren County. Dr. Bauman is a Democrat, but was elected by a large majority from a county that usually gives a handsome majority the other way, which shows in what esteem the veterinarian is held. Dr. Bauman's address follows:

"I wish to thank you in behalf of the I. V. A. for your very kind and gracious words of welcome. I assure you we appreciate your kind treatment. We, as an association, have not forgotten the kind treatment received when we were here five years ago, and when the invitation came to again visit Cedar Rapids we were all glad to accept the same. It is just like going to Grandma's, and we get the cookies too. We greatly admire your city with her fine parks, broad, clean streets and avenues, fine buildings and extra fine hotels. When here before everyone tried to make it pleasant for us, and the press treated us in the nicest manner possible, and the hotels—why it is the general remark among the boys. 'The best ever.' We thank you for the fine quarters provided by the Commercial Club in which we meet, and I assure you every one of the visitors will go to their homes having a warm place in their hearts for your city. Our first impressions are sometimes sadly shattered on a second visit, but we find our second visit even more satisfactory than our first. Again I thank you in behalf of the association."

Minutes of the nineteenth annual meeting as published in April, 1907, AMERICAN VETERINARY REVIEW, were read and adopted as published.

Treasurer's report read and auditing committee appointed, composed of George Scott, D. H. Miller and G. L. Blanche, which committee reported favorably. Report adopted, and committee discharged.

REPORT.

Receipts.

To cash on hand January 26, 1907.....	\$38 05
To cash for dues, January 27, 1907, to January 27, 1908, inclusive	131 00
To membership fees, January 27, 1907, to January 27, 1908, inclusive	50 00
	<hr/>
	\$219 05

Disbursements.

By cash, F. W. Meyers, P. M., stamps..	\$22 00
By cash, G. L. Caswell, printing.....	17 75
By cash, F. W. Meyers, printing.....	6 25
By cash, W. C. Rollins, printing.....	5 25
By cash, Hal C. Simpson, salary.....	50 00
By cash, Miller & Gibson, clinics.....	10 00
By cash, H. Pester, minutes.....	15 00
By cash, St. Louis Button Co., badges..	10 00
Cash in Treasurer's hands.....	82 70
	<hr/>
	\$219 05

Resignation of W. A. Stuhr tendered; was accepted and Dr. Stuhr was elected to associate membership.

D. O. Knisely, of Topeka, Kansas, was elected to associate membership.

C. J. Heckard was detained at home on account of sickness and the Secretary read his case report on Purpura Hæmorrhagica. This subject brought out considerable discussion. G. M. Walrod gives Potassium Chlorate, Spts. Turpentine and Raw Oil in small doses. When swelling is extensive uses hot salt fomentations.

W. W. Talbot reported two cases of possibly Purpura with swollen heads. Upon opening, pus was obtained. He used hot fomentations and Potassium Iodide. E. A. Richardson obtained good results from Adrenalin Chloride. S. H. Bauman gives Ft. Ext. Ergot up to $\frac{3}{4}$ three times daily in severe cases.

C. M. Walrod read his case report of "Traumatic Parotitis of Dog." Afterwards it was freely discussed.

Discussion of canker in foot was freely indulged in. Nearly all reported good results from cauterization, either by medicinal or mechanical means.

A. F. Baldwin reported case of Actinomycosis of Tongue in a horse. Treatment of Potassium Iodide until Iodesim was produced twice. Showed decided improvement. There was some odor due to decomposing of food retained in mouth.

J. W. Griffith reported cases of swollen tongue being treated successfully with Belladonna Ft. Ext. and Boric Acid solution.

J. H. McLeod reports peculiar case. Horse working regular taken sick. Inside of one hour stiff all over. Very troublesome to move, when down, had to be helped up, neck inclined to right side, walked in a circle, tongue swollen.

Treatment of Potassium Bromide, Turpentine and Raw Oil resulted in recovery.

P. Malcolm reported case of Echo Jr. P., 2.07 $\frac{1}{4}$, when being driven wrong way of track, stumbled and fell. Some difficulty in getting on feet. Great difficulty in getting to stable. Soon afterwards an immense swelling developed behind elbow, which extended between front legs. Was sore and swollen, unable to eat and was given oatmeal solution in water. Was a rupture of pectoral and external thoracic muscles caused by falling on foot. Skin was not broken. Swelling was opened and a great deal of blood and serum escaped. Temp. 103. Treatment of Quinine Strychnine and alcohol in water. Hot fomentations of a weak Bichloride solution resulted in perfect cure.

P. O. Koto reported case of immense swelling on hip. Opened and a great deal of blood and serum escaped. Found to be a rupture of popliteal artery. Made recovery.

W. A. Heck reported cryptogramic poisoning. Physic and Potassium Iodide \mathfrak{z} iv three times daily. Recovery in most cases.

Hal C. Simpson reported sore lips and gums caused by barley beards.

H. E. Talbot reported good results from weak chromic acid solution on ulcers of this kind.

J. W. Griffith reported on Epulus as seen in yearlings. Repeated operations and acetic acid usually cured.

P. Malcolm reported large growth on front of metatarsal region removed with comparatively good results.

J. H. McLeod reported good results from tenotomy in young colts for knuckling.

Hal C. Simpson reported case of Plantar Neurectomy on a horse that came to hospital on three legs from ringbone. Field of operation shaved and thoroughly cleaned with soap and Bichloride solution. Operation successful and animal walked off sound. Had good care in hospital for nearly one month without healing, no neuroma or excessive granulation, but no tendency to heal together.

This horse was about ten years old and had previously been cut by barb wire at different times upon all four feet and legs, and in addition had had Fistulous Withers, which had been cured over two years.

H. McConnell told of having been called to see cattle suffering with what he called "Mad Itch," in which they would get up against barb-wire fences and rub until skin was cut into threads, licked parts, tried to bite skin even after they were down, would wriggle around trying to relieve the intense itching, and would keep it up until death ended all. Was more than likely caused by provender, as a change stopped the spread of the disease.

C. M. Walrod reported similar condition caused by eating millet and millet seed in excessive quantities. Post mortem showed impaction of Omasum. Changed feed and gave physic and no more were affected.

M. H. Reynolds, of St. Anthony's Park, Minn., spoke of the Minnesota Stallion Law, mentioning the mistakes of same and offered suggestions for betterment. Stallions having spavins, ringbones, roaring cataract, chorea and curb or curby hock or any contagious or infectious disease were barred from registration.

He also advised the veterinarian to become a member of the different Live Stock Associations, read papers at their sessions, get in touch with them, help them and in turn get them to help us in securing legislation that is for mutual advancement.

January 29, 1908, meeting called to order at 9 a. m.

R. R. Hammond read report of committee on sanitation, which caused quite a good deal of discussion. Report was accepted and committee discharged.

Dr. W. A. Heck reported case in which several hundred dollars worth of cattle died that were being watered from a well into which a number of rabbits had fallen, putrefication followed and the odor from the well could be detected over

100 yards from the well it was so foul. All affected cattle died of a peculiar "mad itch" in which condition were pitiful.

P. Malcolm reported somewhat similar condition caused by city sewerage. A lack of interest was shown through fear of harming some one. He insisted with the result that the city installed septic tank.

H. G. Killips reported loss of nine head of horses that were running in a pasture below septic tank of a state institution at Mt. Pleasant. Water contained 4 grs. to gallon of caustic potash. Owner sold horses which died. He was sued and judgment secured. Owner presented claim to State Legislature, which appropriated him \$1,050.

J. W. Griffith reported loss of hogs near Cedar Rapids that were fed dish water and slops from hotels where caustic potash was used as an aid in cleaning dishes. This slop was hauled in old filthy tank wagons.

L. U. Shipley reported infectious Mammitis in local dairy herd where the cows were fed ensilage in which there was a large amount around the edges spoiled. Stopped feeding this ensilage and conditions improved, those affected recovering and no new cases resulted.

W. A. Heck reported Cesarean operation in sows. This was one of the most freely discussed papers presented at the meeting. All seemed to think it an important subject, although only a few had been doing that line of work.

H. B. Treman reported on impaction of the caecum. This was freely discussed by a great many. D. H. Miller reported on similar case with post mortem showing gangrene of parts. Also one that acted very similar in which post mortem showed that one of the ovaries had adhered to rectum.

P. A. Ageson report was read by Secretary and was discussed. The use of chloroform in these cases particularly caused a number to express themselves pro and con, those favoring seemingly having the majority.

H. Hell reported actinomycosis of the scrotum in a steer. This was freely discussed.

R. R. Hammond reported on infection in foals. This subject gets nearer to the country veterinarian than most any other, and was thoroughly discussed. W. A. Heck reported of infected bladder, ureters and kidneys shown on post mortem. E. A. Richardson used Lloyds Echinocea. P. Malcolm gives

internal antiseptics either to foal or mare. Does not ligate but washes outside and opens up umbilicus freely.

G. M. Walrod cleanses thoroughly H₂ O₂ ligates after injecting Tinct. Iodine.

S. H. Bauman forces Squibbs alum powder throughout with a probe. Has excellent results.

G. Scott ligates when urthra is patent.

J. W. Scott ligates, but if necessary to have drainage, opens skin to one side. Dries up wound as quickly as possible.

F. F. McEvers reports of leakage around suture.

F. F. Parker uses ecrasuer to crush off urachus.

W. D. Gilchrist read an article on meat inspection that was listened to with interest.

P. O. Koto read report of Committee on Legislation.

P. O. Koto, State Veterinarian, told of an outbreak of glanders in Clinton, and showed pictures of a teamster who contracted the disease and died.

F. H. P. Edwards and A. L. Wood were appointed on Committee of Resolutions on account of regular members being absent.

H. E. Talbot reported on mycotic lymphangitis, which might be mistaken for farcy, as at least fifty cutaneous abscesses every test failed to show glanders. Mule is still living and experiments will be made.

So-called Jack sores came in for some discussion.

F. H. P. Edwards read report of Committee on Resolutions. Report was accepted and committee discharged.

Report.

Your Committee on Resolutions beg to report: Whereas this meeting at Cedar Rapids has been so successful in point of attendance and number of new applications, and all of the papers have been so interesting and provoked such an animated discussion by the members present, and that we have been so royally entertained by the Committee on Arrangements, the Commercial Club and the Y. M. C. A., and

WHEREAS, It has come to our knowledge that Dr. Griffith has paid out of his pocket the sum of seven dollars for the use of the Y. M. C. A. Building, and

WHEREAS It is the custom for the sum of ten dollars to be set aside for the clinic, and

WHEREAS, Dr. Reynolds has given us such an interesting and instructive paper on milk hygiene, and that Dr. Carroll.

M. D., of Cedar Rapids, for his paper on comparative tuberculosis; be it

Resolved, That all present members, both old and new, strive to attain for the next meeting a higher standard; and be it

Resolved, It is the sense of the meeting that a vote of thanks be tendered the Commercial Club and Y. M. C. A. and Committee on Arrangements; and be it

Resolved, It is the sense of this Committee that Dr. Griffith be reimbursed in the sum of seven dollars; and be it

Resolved, By this committee, that we follow the usual custom and that ten dollars be set aside for that purpose; and be it

Resolved, That Dr. Reynolds and Dr. Carroll be tendered a hearty vote of thanks.

F. H. E. EDWARDS,
GEORGE C. SCOTT.
A. L. WOOD.

Wm. Drinkwater read report of cases of diseased testicle of Cryptorchids. C. E. Stewart found three hogs in one herd with only one testicle. Were fattened and killed on place, careful post mortem was made but no other found. W. A. Fullerton reported two cases of yearling colts. Each had three testicles. T. A. Shipley reported finding on killing beds hogs in which the cord had doubled on itself and had completely severed testicle, which would be found loose in abdominal cavity. J. W. Griffith reported case of horse where female organs predominated. Was unable to operate successfully, animal very mean. L. U. Shipley reported case of colt that ran until three years old. Looked like mare yet was unable to find testicles on either side. Never showed any disposition to be mean.

A. L. Brodie's paper was read and discussed.

F. J. Nieman reported case of melanosis in a stallion.

T. A. Shipley reported a country slaughter house conditions as found on examination. This was discussed quite freely. The picture was so vividly painted that a great many inquired if the author had used the one in their town for the example.

Secretary read a paper on pyemic arthritides, by Dr. Spencer of Blacksburg, Va. As the subject had been quite freely discussed earlier in the day it was passed over without discussion.

As an injustice was done A. T. Peters when he was expelled from Honorary Membership a few years ago, he was re-elected to Honorary Membership.

OFFICERS ELECTED.

President, D. E. Baughman, Fort Dodge.
 First Vice-President, S. K. Hazelet, Oelwein.
 Second Vice-President, A. L. Wood, Hampton.
 Secretary-Treasurer, Hal C. Simpson, Denison.
 H. E. Talbot, member Executive Committee.

Secretary made announcement that term of W. A. Heck expired, and H. E. Talbot was elected to his place. Attention was called to the mistake. Motion was made that original motion be repealed, and that Talbot be elected to succeed Koto instead of Heck. Carried.

J. W. Griffith as retiring president thanked the members for past favors. D. E. Baughman, incoming president, thanked all and hoped for the same hearty co-operation as had been extended in the past.

CLINIC

Was held at Dr. J. W. Griffith's Hospital, January 30, 1908.

Trephining Frontal Sirius, J. W. Scott; Peroneal Tenotomy, D. H. Miller; Peroneal Tenotomy, F. F. Parker; Straightening Tail, George Scott; Straightening Tail, C. E. Stewart; Tenotomy, J. H. McNeil; Median Neurectomy, J. H. McNeil; Arytenordecotomy, J. H. McNeil; Trephining for Nasal Tumor, N. A. Kippen; Firing Ringbone, T. F. McEvers; Firing Spavin, L. U. Shipley; Amputation of Penis, W. A. Heck; Spaying Bitch, L. U. Shipley; Pole Evil, D. H. Miller—C. E. Stewart.

C. H. Stange, Superintendent of Judging, a number of very fine driving, saddle and draft horses were exhibited. Ribbons were awarded.

Those present who registered were: G. A. Scott, Waterloo; G. Kerr, Washington; C. J. Graf, Manning; A. Kaderabek, Fort Dodge; L. N. McMay, Garden Grove; G. Lames, Dysart; T. C. Roach, Toledo; P. Malcolm, New Hampton; P. O. Koto, Forest City; W. C. Stewart, West Union; J. H. Spence, Clinton; W. A. Heck, West Liberty; E. A. Richardson, Goldfield; J. N. Edwards, Stewart; S. H. Bauman, Birmingham; T. A. Shipley, Cedar Rapids; C. J. Hacket, Muscatine; L. W. Russell, Anamosa; T. F. McEvers, Grinnell; A. L. Wood,

Hampton; J. W. Griffith, Cedar Rapids; C. E. Stewart, Chariton; W. E. Miller, Cherokee; L. L. Diller, Marshalltown; L. U. Shipley, Sheldon; Henry Hell, New Liberty; G. A. Dodge, Northwood; John Thomsen, Armstrong; G. M. Walrod, Storm Lake; R. R. Hammond, Cherokee; W. R. Fullarton, Dubuque; R. R. Dykstra, Ames; A. F. Riechman, Farley; S. K. Hazelet, Olewein; H. Killips, Mt. Pleasant; C. W. Anderson, Jewell Junction; J. H. McLeod, Charles City; B. Harmon, Decorah; J. C. Glenn, Wyoming; D. E. Baughman, Fort Dodge; T. J. Neiman, Marshalltown; C. H. Stange, Ames; Wm. Drinkwater, Monticello; H. E. Talbot, Des Moines; E. E. Howe, Des Moines; S. H. Miller, Rock Island, Ill.; J. W. Scott, Manchester; O. A. Diller, Ottumwa; G. L. Buffington, Brooklyn; B. F. Barber, Fonda; F. C. Bowman, Williamsburg; H. C. Rodgers, Oskaloosa; D. H. Miller, Des Moines; N. A. Kippen, Independence; James Dixon, Tipton; G. W. Blanche, Belle Plaine; W. D. Gilchrist, Cedar Rapids; Hal C. Simpson, Denison; A. F. Baldwin, Creston; W. E. Sharp, Newton; F. L. Roach, Preston; F. F. Parker, Oskaloosa; S. B. Moon, Rock Rapids; F. A. Daudel, Hawkeye; O. G. Ruffcorn, Defiance; G. C. Rasmussen, Audubon; J. P. Jorgensen, Elkhorn; H. M. McConnell, Kansas City, Mo.; S. Stewart, Kansas City, Mo.; C. L. Wilhite, Manilla; W. F. Lazear, Derby; W. W. Talbot, Pella; H. L. Stewart, Lacona; Jerry Wolte, Grand Mound; A. J. Treman, Lake City; J. A. Anstney, Massena; J. S. Potter, Iowa City; H. B. Treman, Rockwell City; Wm. E. Madson, Ames; J. H. McNeil, Ames; Tom Downing, Washington; F. H. P. Edwards, Iowa City; A. S. Brodie, Cedar Falls; Victor E. Kovar, Chicago.

MICHIGAN STATE VETERINARY MEDICAL ASSOCIATION.

The twenty-sixth meeting of this association convened at Lansing, Mich., February 4, 1908, at 3 o'clock P. M., with President McDonald, of Flint, in the chair. Secretary Black, being absent, Dr. William Jopling, of Owosso, was appointed Secretary *pro tem*.

President McDonald in his annual address welcomed the members and visitors, and asked their indulgence for the short address he had prepared. His little boy was just convalescing from an attack of pneumonia, and the time and care the child required prevented the preparation of a lengthy address.

Dr. Hawkins was called upon at this time for his paper on "The Ancient History of Veterinary Science." The Doctor's paper was well received and was favorably commented on.

Under the Head of Reports of Committees, the Committee on Diseases made its report; Chairman Veldhuis, B. A. I. Inspector, Detroit, spoke of tuberculosis and glanders.

Dr. Hawkins, discussing Dr. Veldhuis' talk, reported five cases of glanders in Detroit. Prof. C. E. Marshall, member of committee, gave a talk on "Contagious Abortion," saying that it was quite prevalent in this state; the germ a peculiar one and causing more mischief than tuberculosis; mentioning disinfectants most useful. He also spoke of diseases in sheep and swine, and stated that no remedy had been found as yet for "hog cholera."

Dr. G. W. Dumphy, of P. D. & Co., discussing Prof. Marshall's report, said he would like to impress the importance of contagious abortion upon the members. It is becoming alarming in extent. We cannot exercise too much care. Veterinarians should give this disease their personal attention and not leave the treatment in the hands of others. Bichloride should be used with caution. The Doctor also spoke of hog cholera, and said that no remedy had yet been discovered. Dr. Armour asked Prof. Marshall what disinfectant he would advise on contagious abortion? The reply was 1% Lysol Sol. Dr. Dumphy recommended the same, but said any coal tar product was good; he also advised Lysol, strength $\frac{3}{4}$ of 1%. Dr. Deadman, of Sault Ste. Marie, spoke of an unusual disease occurring in his vicinity which was very fatal. High temperature, germ in soil of pasture. Dr. F. C. Wells, of Saline, ex-State Veterinarian, spoke of this disease also, did not know the cause, but was found in the copper country.

Dr. Harrison's paper, "Cases Met With in Practice," was an account of those cases of difficult parturition, which although the outlook is favorable, the results were fatal. Dr. Harrison's contributions are always practical and this paper was no exception.

Dr. Dumphy, as a member of Committee on Intelligence and Education, spoke of the meeting of the Nebraska Veterinary Association, in Lincoln. He said the Westerners are hustlers and beat us a block in energy and enthusiasm. He suggests further that we invite Prof. Shaw to give a talk upon "Animal Husbandry," at our next meeting. Dr. Hawkins advised the

younger members to get into the harness and inject vim and energy into our association. Dr. Brenton also discussed Dr. Dumphy's suggestions.

Dr. A. McKercher, Chairman Committee on Clinic, said that owing to the amount of matter on the program clinics were out of the question.

President McDonald asked that the question of a summer meeting be taken up. Dr. Deadman presented a personal letter from the Mayor, and an official letter from the City Council, and a letter from the Commercial Club of Sault Ste. Marie, all extending cordial and pressing invitations to hold our next summer meeting in their city. Dr. D. B. Allen, by letter, and Dr. Deadman personally added pressing requests that we accept the invitation of their city, and that they would see that we had a good time. Drs. Dumphy, Armour, Harrison, States, Stevens, Gibson and Wells all spoke favoring going to the Soo for our summer meeting. Action postponed until later in the session.

Upon motion the meeting adjourned until 7 o'clock.

7.30 P. M.—Meeting re-convened. President called for roll-call, Secretary Black having arrived with the books. The following members were present:—Drs. H. M. Armour, A. E. Alexander, S. Brenton, Judson Black, Hal. L. Bellinger, W. F. Carr, Chas. H. Clark, J. F. Deadman, E. Austin, J. D. Bell, F. M. Blatchford, L. F. Baldock, H. H. Clement, D. Cummings, F. G. Duff, Jas. S. McDonald, James Drury, D. S. DeWolfe, R. F. Erwin, Geo. D. Gibson, J. Hawkins (Hon.), James Harrison, Wm. Joplin, J. J. Joy, R. W. McDonald, Geo. C. Moody, Robert Muir, Prof. Marshall (Hon.), John Russell, U. S. Springer, H. E. States, A. B. Sexsmith, W. H. Wilkinson, F. C. Wells, J. C. Whitney, Z. Veldhuis, Geo. W. Dumphy, W. H. Erwin, Thomas Farmer, H. M. Gohn, W. A. Haynes, W. S. Hamilton, C. L. Jones, D. R. Krull, A. McKercher, A. H. Moody, W. W. Munger, C. C. Petty, J. B. Stevens, G. R. Switzer, H. S. Smith, Geo. Waddel, P. W. Wooley, C. A. Waldron, J. E. Ward—55. Visitors—Pres. J. L. Snyder, M.A.C.; Prof. R. S. Shaw, M.A.C.; W. J. Johnson, Paw Paw; F. G. Gilbank, Detroit; W. A. Ewalt, New Haven; H. T. Creagan, Decatur; W. L. Drinkwater, Utica; Dr. L. M. Hurt, Veterinarian M.A.C.; Drs. A. L. Tiffany, Monroe, and V. M. Curry, Midland; E. B. Cavell, Northville; T. L. McConnell, Reading; Rep. Simpson, of the Legislature.

Moved and supported that the regular order of business be postponed until to-morrow morning, and the program as arranged for this evening be proceeded with. Carried.

Pres. Snyder was called upon for his address. He extended on behalf of the M. A. C. an invitation to our association to hold any of our meetings at the college; also to come at any time collectively or as individuals and make a visit and inspect the live stock, etc. Advised feeding all hay and keeping all straw on the farms. As live stock is in the line of all veterinarians, they should encourage the better breeds and pure strains.

In reply to a question by Dr. Dumphy, Prof. Snyder said: "The Board of Agriculture is anxious to institute a Department of Veterinary Science at the college at once, but would have to wait, as no appropriation was made for the purpose when the bill passed the Legislature authorizing the Veterinary Department. It would be necessary to curtail in some of the other departments, but he was sure that would come in a few years, if not sooner. "When we do have a school, we want the best, so that when men graduate from it they will take equal rank with the graduates from the best schools."

The report of Committee on Legislature, which was presented by Dr. Gohn, gave a very full and comprehensive history of the struggles and disappointments that were encountered before we procured the passage of our present law. Considering the forces that are always present opposing our efforts, we have accomplished more the past session of the Legislature than ever before. Rep. Simpson (who introduced an opposition measure and used ever effort to defeat our bill, and who finally accepted our amendments and secured the passage of our present law) was present and gave a talk on the legislative matters. He denied all knowledge of the substituting the word "or" for "and" in the law which was supposed to have been surreptitiously done by some person, thus making Section 4 read "Medicine *or* Surgery." Dr. Gohn submitted a letter from Rep. Norton, which said that the change was made at the suggestion of Rep. Baker and agreed to by Mr. Norton and Simpson. Drs. Stevens, Smith, Dumphy, Duff, McDonald, Waldron, Whitney, Switzer, Wells and Farmer, all spoke discussing the Legislative Committee's report. The question was pretty thoroughly considered of how to proceed against violators of the practice law, many taking the position that a committee of the association should act as prosecutors, others that the local officers of

the law are the only ones having jurisdiction. It was suggested that the sheriff or deputy be informed of the violations and that he or they should secure the evidence. No action was taken on this question.

It was moved and supported that the report of Committee on Legislature be received and filed. Carried.

Upon the suggestion of Dr. Gohn, it was decided upon motion to extend a vote of thanks to the Legislative Committee of another veterinary association in Michigan for their loyalty to our committee and bill, and strenuous opposition to the opposing bill and the parties pushing it.

Mr. Ed. G. Folsom, of Mt. Clemens, a student of the O. V. C., furnished a paper upon "*Strongylus Gigas* in the Dog" which was read by the Secretary. This was a history of an interesting post-mortem in a bitch which had died a day after ovariectomy from causes apparently remote from the operation. Ante-mortem symptoms observed were excitability, so much so that the owner thought she was rabid. Immediately before death she had spasms of the diaphragm. Post-mortem revealed in the region of the liver (which organ had almost disappeared) two gigantic worms, one 37 and one 22 inches long, one of which had pierced the diaphragm and had started into the thoracic cavity. After considerable research, Mr. Folsom concluded he had run on to specimens of the *Strongylus Gigas*, which conclusion was substantiated by Dr. Duncan, lecturer on Entozoa in the O. V. C.

The following gentlemen made application for membership:

Dr. Theo Lane, Ann Arbor, graduate of Western Vet. College, 1901. Vouchers, W. H. Erwin and H. S. Smith.

Dr. F. G. Gilbank, Detroit, O. V. C., 1888. Vouchers, J. J. Joy and James Hawkins.

Dr. V. M. Curry, O. V. C., 1906. Vouchers, W. F. Carr and W. A. Haynes.

Dr. E. B. Cavell, Northville, O. V. C., 1906. Vouchers, W. H. Erwin and F. M. Blatchford.

Dr. W. D. Seibert, Petosky, Det. V. C., 1896. Vouchers, Judson Black and Z. Veldhuis.

Dr. T. L. McConnell, Reading, O. V. C., 1905. Vouchers, H. M. Armour and J. C. Whitney.

Dr. H. T. Creagan, Decatur, O. V. C., 1892. Vouchers, Judson Black and Wm. Jopling.

Dr. W. Austin Ewalt, New Haven, O. V. C., 1907. Vouchers, Judson Black and E. Austin.

A. L. Tiffinay, Monroe, O. V. C., 1905. Vouchers, D. S. Crull and W. F. Carr.

Dr. W. J. Johnson, Paw Paw, O. V. C., 185. Vouchers, Judson Black and Wm. Jopling.

Dr. W. L. Drinkwater, Utica, O. V. C., 1886. Vouchers, Judson Black and E. Austin.

The applications were referred to the Executive Committee, who were requested to report next morning.

The admission of graduates of questionable colleges was discussed by Drs. Hawkins, Armour, Harrison, States, H. S. Smith and others. The opinion prevailed that while it would strengthen our organization as a political factor, the step was deemed inadvisable. Other than this, no action was taken.

Adjourned until 9 A. M., February 5th.

The regular order of business that should have been disposed of at the beginning of the session was taken up at this time.

The Executive Committee recommended the admission of the applicants to membership in the association, which was done in regular form.

The report of the Secretary-Treasurer showed the receipts of the past year, including balance on hand February 1, 1907, were \$360.54, from which was disbursed \$186.53, leaving a balance on hand February 1, 1908, of \$174.01.

The report was referred to the Committee on Finance.

Moved and supported that a committee be appointed to draft resolutions sympathizing with Dr. R. R. Bell, of New York, who was reported to be seriously ill. Carried. Drs. Jopling, Dumphy and States were named as such committee.

Communications from the Governor, Dr. R. R. Bell, Dr. D. G. Sutherland and others were read, and on motion were received and placed on file. Continuing the report of the Committee on Intelligence and Education, partially made yesterday, Dr. Dumphy advised that every legitimate effort be made with the next Legislature to get an appropriation allowed for the Veterinary Department of the M. A. C.

Dr. Jopling also spoke along these lines. It was suggested that our Committee on Legislation be also a committee to confer with and to assist the Board of Agriculture and the Faculty

of the M. A. C. in instituting a Veterinary Department at the college. Upon motion this suggestion was adopted.

Drs. Harrison and States advised getting to work early in the next session of the Legislature and work in harmony with the M. A. C. authorities in the effort to procure the necessary appropriation. Communication from State Veterinary Board containing correspondence reflecting on one of our members, which was referred to Executive Committee, who after making an investigation, found no cause for action by the association, as the charges were not substantiated.

Dr. C. A. Waldron's paper, "New One on Me," brought up a very interesting case of poisoning by locust bark in a team which the Doctor treated, and which showed very unusual symptoms, the cause of which was very obscure. (The cause was discovered after the team was convalescing.) The symptoms as found were: "Extreme lassitude, including almost imperceptible pulse, which when found was weak and prolonged; respiration less than normal by one-third and sonorous; temperature normal; no pain, no appetite; mucous membrane of the mouth somewhat swollen, caused by congestion of the capillaries; slight ptialism. Above all the dilation of the pupil. In fact, I should judge the same symptoms as belladonna poisoning." Dr. Armour reported a case almost identical to Dr. Waldron's which he knew to have been caused by locust bark. Drs. Brenton and Whitney said they had seen cases similar.

Dr. Jas. Drury gave an excellent and timely paper on "Contagious Abortion." This paper was particularly interesting at this time when this disease is unusually prevalent in Michigan. A good discussion followed on this subject.

Pres. McDonald announced that election of officers would be taken up immediately upon re-convening after dinner.

Moved and supported that we adjourn until 1 o'clock sharp. Carried.

1.30 P. M.—Election of officers now being in order, nominations for president were called for. Dr. T. G. Duff's name was placed in nomination. No further names being placed in nomination, it was moved and supported that the rules be suspended and that the Secretary cast the ballot of the association for Dr. Duff. This was done and the President declared Dr. T. G. Duff elected President for the ensuing year.

There being only one nominee for each of the offices, the same procedure was followed in case of each, and President McDonald declared the following elected in the order named:

First Vice-President—Dr. J. F. Deadman, Sault Ste. Marie.

Second Vice-President—Dr. George D. Gibson, Adrian.

Third Vice-President—Dr. W. H. Erwin, Howell.

Secretary and Treasurer—Dr. Judson Black, Richmond.

First Director—Hal L. Bellinger, Plainwell.

Second Director—D. S. Krull, Union City.

Third Director—W. A. Haynes, Jackson.

Fourth Director—A. McKercher, Lansing.

Fifth Director—R. F. Erwin, Alma.

Sixth Director—F. G. Gilbank, Detroit.

The question of a summer meeting was brought up again at this time. It was moved and supported that we have a summer meeting at the Soo next summer. After considerable discussion, which brought out the fact that as business of vital import to the veterinary profession in Michigan demanded a full attendance of the members of the A. V. M. A. at the meeting at Philadelphia, that it would be better to postpone our summer meeting until another year. Question put and defeated.

Moved and supported that it is the sense of this meeting that the summer meeting be held at the Soo in the summer of 1909. Carried.

Prof. R. S. Shaw, experimenter with live stock at the M. A. C., gave an address upon the subject, "The Relation of the Veterinarian to the Live Stock Industry." He spoke of live stock in the West and that it was largely inspected by veterinarians. The interests of the veterinarian and the live stock industry are identical. He spoke of the necessity of improving breeds of live stock and that veterinarians could do a great deal of missionary work along this line. The quality of live stock in Michigan is below the average, which is due to the indiscriminate crossing of breeds, which is demoralizing.

The Professor made another startling assertion when he said that the 28,500 bulls in Michigan were worth \$5.80 less per head than year-old steers. There are but very few poor-bred herds in the state. Capital is lacking among the average farmers. Better methods of breeding is what is wanted. Breed along uniform lines. He advised veterinarians to co-operate with the live stock breeders in the state in the organization of a Horse

Breeders' Association, there being no organization of that kind in Michigan.

Dr. Dumphy also spoke along these lines and thought that our association should meet at the same time as the State Live Stock Breeders' Association so that one day or one-half day could be made a joint meeting. In this way questions of mutual interest could be discussed.

Dr. Cummings suggested that we change the date of our annual meeting so as to have it come earlier in the season and to conform with the date of the Stock Breeders' Association.

Dr. Hurt, Veterinarian at the M. A. C., spoke complimenting the association on its veterinary law.

The committee that was requested to write resolutions sympathizing with Dr. Bell offered the following, which was unanimously adopted.

"Whereas, It has been made known to the members of this association that Dr. Roscoe R. Bell, of Brooklyn, N. Y., Editor of the AMERICAN VETERINARY REVIEW, and one of the most prominent and highly respected veterinarians in this country, is seriously ill.

"Therefore be it resolved, That this association express its sincere regret for his affliction and our earnest wishes for his speedy recovery;

"And be it further resolved, That a copy of these resolutions be forwarded to our beloved fellow-worker and the same be spread upon the minutes of our association.

"GEO. W. DUMPHY,
"WILLIAM JOPLING, } Committee."
"HARRY E. STATES, }

The Finance Committee reported that they had looked over the report and books of the Secretary-Treasurer and found everything correct and balance on hand as stated in report,

Drs. Campbell, Jackson, D. W. Curtiss, Cadillac and G. A. Waterman, Ann Arbor, presented their resignations as members of the association. As the gentlemen were clear on the books, on motion their resignations were accepted.

The following promised papers for our next meeting: Drs. Armour, Smith (H. S.), and Cummings.

Dr. W. A. Haynes' paper, "My Personal Experience with Hydrophobia," was a good history of a number of cases of this

disease coming under the Doctor's own observation, and was well received.

Moved and supported that the Secretary be allowed ten dollars in addition to his regular salary for services the past year. Carried.

Notice was given of the following amendments to the by-laws for final action at our next meeting:

1. That Article IV., Chapter II., be changed to read \$35.00 instead of \$25.00.

2. That Article II., Chapter VI., be changed to read "shall be designated by the Executive Committee," instead of "on Tuesday after the first Monday in February."

Moved and supported that we extend a vote of thanks to Pres. Snyder, Prof. Shaw and Hurt for their contributions to our program. Carried.

Moved and supported that a vote of thanks be given our retiring officers for their earnest work for the welfare of the veterinary profession for the past year. Carried.

Retiring Pres. McDonald called Pres.-Elect Duff to the Chair and handed him the gavel. Dr. Duff, in a few appropriate remarks, thanked the association for the honor they conferred upon him in electing him to the office of President, and then announced the standing committees as follows:

Intelligence and Education—Dr. William Jopling, Owosso; Dr. George W. Dumphy, Detroit; F. C. Wells, Saline.

Disease—Dr. Z. Veldhuis, Detroit; Dr. H. E. States, Detroit; Prof. C. E. Marshall, M. A. C.

Legislation and Colleges—Dr. C. A. Waldron, Tecumseh; Dr. H. M. Gohn, St. Johns; Dr. Jas. Harrison, Maple Rapids; Dr. G. W. Dumphy, Detroit; Dr. A. McKercher, Lansing.

Finance—Dr. D. Cumming, Port Huron; Dr. R. F. Erwin, Alma; Dr. John Russell, Elsie.

Clinic—Dr. A. McKercher, Lansing; Dr. George C. Moody, Mason; Dr. George Waddle, Kalamazoo.

Press—Dr. W. L. Brenton, Detroit; Dr. J. J. Joy, Detroit; Dr. J. E. Ward, Perry.

Notwithstanding the fact that many of our members were unable to get to the meeting on account of the blizzard and snow blockade this was one of the best meetings in the history of the M. S. V. M. A. in attendance and enthusiasm.

Adjournment.

JUDSON BLACK, *Secretary.*

INDIANA STATE VETERINARY ASSOCIATION.

This association met at Indianapolis, Ind., January 2, 1908, with President Archer in the chair and one hundred and two members in attendance. Minutes of previous meeting were read and approved. Reports of Secretary and Treasurer were also read and approved.

Dr. Davis reported for the Entertainment Committee, explaining that no banquet would be held, but that we were to sleep after night session and get up bright in the morning ready for plenty of clinic.

New members were admitted as follows:

Active List—Dr. J. C. Carson, Cicero, Ind.; Dr. C. I. Fleming, Terre Haute, Ind.; Dr. B. S. Hess, Kentland, Ind.; Dr. A. V. Johnson, New Albany, Ind.; Dr. F. C. McCoy, Orleans, Ind.; Dr. F. P. Scott, Oxford, Ind.

Honorary List—Dr. W. A. Axby, Harrison, O.; Dr. E. E. Guinn, Oakland, Ill.

Report of State Board of Veterinary Medical Examiners was read. It was exhaustive in information and statistics.

Officers for ensuing year:

President—Dr. G. H. Roberts, Indianapolis, Ind.

Vice-President—Dr. Walter Langtry, Ft. Wayne, Ind.

Secretary—Dr. E. M. Bronson, Indianapolis, Ind.

Treasurer—Dr. J. W. Klotz, Noblesville, Ind.

Board of Censors—Dr. J. G. Heighway, Ladoga, Ind.; Dr. W. A. Dryden, Columbus, Ind.; Dr. A. V. Carter, Covington, Ind., were appointed by the newly-elected Vice-President in the absence of the President.

Literary Program.

Dr. O. C. Newgent, of Russiaville, read a paper on "Malignant Oedema," the patient being four months in recovering; also a paper on "Locomotor Ataxia," covering about 25 cases, upon which he had exhausted the materia medica with but little or no success. Dr. Boor, under discussion of the above, reported the affection in a foal by McKinney that has apparently at the age of two years recovered under the use of Nux Vomica and Liquor Potassium Arsenitis.

Dr. J. E. Gibson, of Jamestown, read a paper on tuberculosis, with reference to a state inspection law. The subject was handled in an energetic and able manner. Discussion:

Dr. Boor—No cattle should enter the state without the tuberculin test.

Dr. Langtry—Is tuberculin the only test?

Dr. Gibson—So the Government claims.

Dr. Langtry—Inject tuberculin and it will wake up the encysted bacilli and produce the disease when you would not have it otherwise. It also renders stock barren—(and cited cases to support statement). To check tuberculosis or any other hereditary disease, see that mated male and female are free from disease.

Dr. Fleming—I believe in tuberculin as a sure test. A dairy of 50 Jersey cows and 2 bulls were injected, and 48 reacted; post-mortem verified 47 of them.

Dr. R. A. Craig—A prize steer at Chicago Fat Stock Show was injected; he reacted and was killed under inspection and the carcass was tanked. As we use it on the college herd it is decidedly successful.

Dr. C. I. Fleming's paper on glanders was largely statistical, but developed or proved the fact that mallein when in competent hands was a reliable test.

Dr. J. L. Hiday's paper was a complex "colic" and azoturia, one of those unexpected things that are not "in the book."

The azoturia being peculiar in that it followed, seemingly, an attack of acute indigestion. Treated with $\frac{3}{4}$ ij of Adrenalin Chloride in $\frac{5}{8}$ vi water for three doses; animal got up and well.

In reply to query as to virtue of Albumone, Adrenalin, W. B. Craig says: "I have tried them and they are N. G."

Dr. A. V. Carter used Upjohns Couch Grass combination $\frac{3}{4}$ j doses, t. i. d. Bronson suggested bleeding and inject normal salt solution.

"Infectious Pneumonia," a paper by Dr. W. B. Craig, brought out good discussion in the way of treatment, especially with Tallianine and Nuclein.

Adjourned 5.30.

Reassembled at 8 p. m. to listen to Dr. Walter Sharpe on some diseases of the eye, considered from the veterinarian's standpoint.

It was so rare a subject and so well treated that the Doctor was given a vote of thanks. He discussed Iritis, Glaucoma and Recurrent Ophthalmia. The latter was caused principally by heredity; also by low damp pasture and poor hygiene. Astigmatism, as related to the short and far-sighted horse or "shyer,"

was considered. He urged us to familiarize ourselves with the use of the Ophthalmoscope.

Dr. J. L. Axby's paper on "Serum Therapy" was well received and fully discussed. His remarks drew out the fact that there are several antitoxins that are new but valuable, as: Nuclein in purpura and respiratory trouble; antitetanic serum in large doses as a curative for tetanus, etc.

Dr. R. A. Craig, with his slides of "Infectious Organisms," was decidedly educative.

Dr. G. H. Roberts gave quite a number of slides of "Glanders," also some recovered injuries, that were of more than passing interest, thanks to the Doctor's hobby for the camera.

The literary program finished, the President announced the following committees:

PROGRAMME—Dr. F. H. Davis, Rushville, Ind.; Dr. Don. McMahon, Noblesville, Ind.; Dr. Walter Langtry, Ft. Wayne, Ind.

ARRANGEMENT—Dr. W. B. Craig, Indianapolis, Ind.; Dr. J. L. Axby, Lawrenceburg, Ind.; Dr. O. C. Newgent, Russiaville, Ind.

LEGISLATIVE—Dr. J. B. Archer, Spencer, Ind.; Dr. T. A. Balser, Newcastle, Ind.; Dr. O. L. Boor, Muncie, Ind.; Dr. G. G. Ferling, Richmond, Ind.; Dr. J. L. Mitchell, Evansville, Ind.; Dr. F. H. Davis, Rushville, Ind.; Dr. C. P. Wilson, Greenfield, Ind.; Dr. R. A. Craig, La Fayette, Ind.; Dr. J. W. Klotz, Noblesville, Ind.

Adjourned 11.45 P. M. to meet at Indiana Veterinary College at 8.30 A. M.

Friday A. M.—Most of the members in attendance the day before remained over for the clinic which was held at the Indiana Veterinary College. The first on the program was a ridgling operation by Dr. J. W. Klotz, of Noblesville. The second was a removal of the lateral cartilage by Dr. Klotz. While the preparation of this was going on, Dr. Davis exhibited a case of the same kind, operated upon by Dr. Roberts sixty days previous, the animal being shod and ready for work, thus showing the members the operation and the result. There was also exhibited a case of atrophy of the gluteal muscles without any defined or known cause. The case elicited considerable discussion which was finally concluded to be due to a paralysis of the

sciaticus. Dr. Davis trephined gray mare and removed two diseased molars. The sinuses of that side being full of inspissated pus. Several other minor operations were performed, and in all it was the most interesting clinic in recent years.

E. M. BRONSON, *Secretary*.

SCHUYLKILL VALLEY VETERINARY MEDICAL ASSOCIATION.

This association held its semi-annual meeting in the Board of Trade Rooms, Reading, Pa., on Wednesday, December 19, 1907, with Dr. D. R. Kohler occupying the chair, while Dr. W. G. Huyett recorded the minutes.

The following members responded to roll call: Drs. Kohler, Schneider, Wehr, McCarthy, Huyett, Noack, Posteiger, Bieber and W. S. Longacre.

Visitors, Drs. C. J. Marshall, W. H. Hoskins, Secretary State Examining Board, and F. H. Schneider, Philadelphia; W. H. Ridge, Moose; F. U. Ferusler, Lebanon; J. W. Sch'lade, Members of Examining Board, Auburn; Frank Mackie and G. Allen Jarman, State Veterinarians, Baltimore, Md.; S. G. Burkholder, physician, Reading; Mr. J. J. Kenney, New York, and others.

The minutes of the previous session were read and approved. (President's address enclosed; kindly insert here if you consider fit.)

The secretary read numerous communications, among which was one from Dr. J. A. St. Clair, of Indiana, Pa., offering his practice for sale, owing to ill health.

a. Delivered to Pennsylvania Veterinary Medical Association.

Dr. Huyett made a report of its semi-annual session held at Harrisburg. He referred to the question of raising the registration fee from \$1 to \$5, which brought forth a good discussion; the money to be used by the State Veterinary Board for the prosecuting of illegal practitioners; this subject to be finally considered at the March session. The proposition of holding a three-day session of the society, instead of a two-day, for the annual meeting, was debated, and a postal card vote taken, this resulting in the two-day session, as customary. Dr. Huyett also announced that the Pennsylvania Association deserves much credit for having done much to bring the convention of the American Veterinary Medical Association for 1908 to Philadelphia. It will take place in September.

The local meeting argued the advisability of raising the registration fee. Some members opposed it because it would decrease the number registering, others concluding it would have a good effect, because it would rid the profession of persons who are a discredit to it.

Dr. Kohler, a member of this committee, also favored us with a good report.

b. Delivered Keystone Veterinary Medical Association.

Dr. Noack reported good meetings.

Drs. Marshall and Ridge, members of that organization, also praised the work of that small body.

c. Delivered American Veterinary Medical Association.

Dr. Noack says the meeting at Kansas City was by far the best ever held, with a gathering of upwards of 700 people, and taking in about 300 new members.

Dr. Marshall also referred to the excellent programme gone over. A new operating table, which seems very convenient, was shown and used at this meeting. He furthermore said that the veterinarians of Pennsylvania should all stand together to make the session of the American Veterinary Medical Association a success, if one desires to have the book of minutes or proceedings of the last national convention, he would furnish them for \$1.50 apiece. Every veterinarian that is eligible should become a member of this body next fall, as there are only about 15 members of this State, while we have about 300 eligible men.

Dr. McCarthy brought up the new Stallion law, a copy of which was read before the society, inquiring whether the owner of a stallion could breed from his own horse without having same registered.

Dr. Ridge says he can, because a man can do with his own stock as he pleases for his own use, but if he sells, it is different.

Dr. Marshall explained that the intention of this Stallion law was more a matter of education, trying to improve or encourage good breeding, rather than to prove burdensome or a source of prosecution upon the stock owner.

COMMITTEE ON MEAT AND MILK INSPECTION.

Dr. Newhard, the chairman, being absent, Dr. Noack, one of the State Meat Inspectors, was called upon.

He gave an interesting recital of the work thus far accomplished. Their work, he said, was strongly backed by public sentiment, and that the new meat inspection law has been received with more favor by the people of Pennsylvania than any

other law. Now and then a defiant butcher was met, but is soon persuaded to bow to the law, while the general public is in favor of the measure. Conditions were very bad in some instances, but upon a second visit we find great improvement. Every veterinarian should endeavor to gain the sentiment of the public in the necessity of local inspection. We find that many hogs are infested with parasitic diseases and tuberculosis, though hogs suffer more from parasites than cattle.

This work is very extensive, and at this time is only about one-half completed—while we maintain good inspection at one place one week, then go to some other section, some of the slaughter houses fall back to their former methods.

The inspectors are encouraging the councils of municipalities to install local meat inspection offices with their own inspectors.

Dr. Ridge says farmers of his section of the State are required to procure an annual license at City Hall to sell their own produce, but are not allowed to sell poultry or any meat, as they are obliged to lift another license for that privilege. Dr. Ridge read a copy of said license before the society.

Dr. McCarthy says in Pottsville all farmers come to town and sell their goods, without any license. Dr. Ridge thinks, if this question would come to a suit, the farmer would win out.

Dr. Noack says farmers cannot be prevented from killing their own cattle and hogs, and an inspector cannot take diseased carcasses if the owner insists he wants it for his own use, but if he sells or offers for sale such meat, then he comes under the law.

To another question it was stated that an inspector could not enter any hotel and seize diseased meat, but in first class cities there are local inspectors who are clothed with such powers.

It was also brought to light that all butchers in Berks county have to take out an annual mercantile license, besides butchers in first class cities have to pay \$1 regular butcher license.

Dr. Schneider inquired from Dr. Marshall their system of milk inspection in Philadelphia milk dairies.

Dr. Marshall, taking the floor, said that all dairies within the city limits supplying milk must have their herds tuberculin tested, but outside the city limits conditions were as bad as at any other place; again, all milk coming in the city is tested once in a while for formaldehyde, etc.

Dr. Marshall, furthermore, said milk in Philadelphia is fast improving in quality. He thinks Pennsylvania can boast of a new milk inspection law within a year or two.

Dr. Ridge proclaimed that every veterinarian could be of valuable assistance in the passage of beneficial veterinary laws by speaking or writing to your representative at legislature; again, have a small, concise report of the measure at stake published in your local paper or see and interest some influential man who probably can do more with the legislator or politician.

The question of sanitary conditions of dairies was also discussed; as dirty, filthy and dark stables are just as bad as tuberculosis itself.

Dr. Kohler urged a campaign of education among the farmers regarding the terrible results of tuberculosis and suggesting that literature pertaining to it should be distributed.

It was the consensus of opinion of the members that it was a mighty big job to rid our State of this dreaded disease.

Dr. Noack differed from the opinion of Dr. Ridge that in testing cattle that the rising temperature is often produced by other conditions. It was, however, explained that a rising temperature from other conditions could be differentiated as follows: The temperature of a tuberculous cow, if diseased, rises (then sinks) and rises again, while an animal probably affected by some other condition, the temperature rises, then suddenly sinks, and stays down.

Animals ought not to be tested at once when cattle are shipped and just taken from car; again, an animal should not be tested when you have a high temperature prior to your injection. Temperatures will drop in generalized cases—such instances having been reported by Drs. Ridge, Huyett and McCarthy.

If you have a temperature in testing of 104° F. after tuberculin is injected, you can depend upon that cow being tuberculous.

Dr. Marshall says he only takes the temperature once before the injection; for instance, takes it at 5 p. m., injects at 7 p. m., then takes temperature at 9 p. m., which will give you these two preliminary temperatures.

This question brought a good many members to their feet, but Dr. Marshall says it is a reliable procedure, as it is the routine followed by the secretary of the State Live Stock Sanitary Board.

Dr. Ridge says in testing a large herd time can be saved in using three thermometers at the same time. Use thermometers with an eye at one end, insert in vagina, have a string one foot long, fasten one end to eye of same, at other end have a rubber band with a button and button round the tail; then the next one, etc.

Some of the members considered this method not practical, having tried it.

Dr. Noack says don't test a cow if temperature goes up to 103.5° F. prior to injection, but hold her over for a day or two.

Drs. Leonard Pearson and S. J. J. Harger, of Philadelphia, were expected to be present but were detained by pressing engagements.

Dr. A. R. Potteiger read a brief but valuable paper upon "Cæsarean Operation in the Sow." He said in part, that he has operated on about 700 cases, with a mortality of only 5 to 7 per cent. Many hogs are raised in Snyder county, while but few cases of tuberculosis are met with. This paper was well discussed, many inquiring for the technique of the operation.

The rest of the essayists having failed to put in an appearance, neither forwarded their paper to the secretary, various other diseases were discussed.

Dr. Ridge referred to rumenotomy in cattle, having performed the operation with good success, though he complains of the difficulty of retaining the sutures longer than a couple of days, a fistula being the result, prolonging complete healing of the wound to 2 or 3 months.

Dr. Ridge has had experience with sulphate of magnesia as a local anaesthetic, and speaks favorably for its established use.

Shaking of the head in horses was next brought up and discussed.

Dr. Kohler reported a case of a *puller*; if you would drive said horse for an hour or two after meal time he would fag and stagger; not noticeable any other time.

Dr. McCarthy reported a horse that would break every check-rein, and if too strong, would switch and sit right down upon the shafts in driving; these conditions were attributed to nervousness.

Dr. Marshall says leave the proprietary remedies alone, because we don't know what they contain, while Dr. Hoskins added that we should also encourage people not to use them. Medicine, he says, is too uncertain at best. Also try to discourage the

advertisement of patent remedies and instruments; they tend to lower and degrade the status of the profession.

As secretary of the State Examining Board, Dr. Hoskins was called upon to give an account of State Registration.

He said that in 1889 there were 2,023 registered veterinarians in Pennsylvania, but that under the law of 1905, there were only 856; of the former number 300 had died, 100 had retired, and 500 were illegal practitioners.

He was of the opinion that next year there would be less than 800; of those now registered, less than 80 were under 30 years of age.

Unless there is a larger number of young men taking up the study of veterinary medicine, the number will fall to 700 before very long, and this is not enough.

We have counties in the State where there is not a single qualified veterinarian.

A serious thing that confronts registration is the enormous number of diplomas that are being issued by Correspondence Schools. I have plenty of evidence of parties who have purchased these diplomas at from \$60 down to \$12.50; one of these schools was reported to be in Iowa and two in Canada.

The young men in the country are led into buying them without receiving anything in return; they cannot register, and are simply that much money out of pocket, besides wasting a lot of time in studying the books sent them and answering the questions submitted.

There are Correspondence Schools that are doing a good work in some other lines, but these legitimate institutions are not issuing veterinary diplomas.

Dr. Sallade told of the advancement of the profession. It was at one time despised, he said, but is now recognized among the professions.

A motion was made to adjourn by Dr. Bieber, seconded by Dr. Huyett, when the members and visitors resumed in a body to the banquet hall of the Bessinger Café, where a well-prepared repast was tendered them by Dr. Noack. The table was prettily decorated, and Mr. Krick, the proprietor, served a well-selected menu in excellent style.

Dr. Hoskins, of Philadelphia, who officiated as toastmaster, called upon a number of persons for speeches.

Judge H. Willis Bland, an honorary guest, made a few appropriate remarks on the honesty of the profession, and paid a

splendid tribute to the host, Dr. Noack, whom he regarded as a meat inspector of sound judgment.

Dr. J. W. Sallade spoke tersely of the importance of veterinarians standing together and making cleanliness a rule in meat markets.

Dr. S. G. Burkholder, a charter member of our association, now a prominent physician of Reading, was next called upon by the toastmaster to explain why he considered it wise in his estimation of leaving our honored profession to select the practice of medicine.

Dr. Burkholder nobly responded, saying in part that although he now ministers to the wants of the human family, he still has the veterinary profession at heart, and always cherishes the day of session of this organization, and endeavors to be present if possible, seldom missing a meeting, feeling that the medical man is a close brother to the veterinary practitioner.

He compared the diseases of animals with those of men, and urged that the doctor and veterinarian should co-operate in the study especially of infectious diseases, transmissible from animals to men and vice versa.

Other parties called upon were John W. Rouch, superintendent of the Reading *Eagle*; Dr. F. H. Schneider, Philadelphia; Drs. Kohler, Huyett, Ferusler and others.

To the regret of all present, Drs. Marshall, G. Allen Jarman and Frank Mackie, the two latter of Baltimore, Md., made a hasty retreat immediately after lunch to catch the train for Philadelphia to make proper train connections for Baltimore.

A vote of thanks was tendered our visiting brethren in fleeing from other yokes of duty to assist so ably in making our meeting a grand success.

The next meeting of this organization will be held at Reading, June 17, 1908.

W. G. HUYETT, *Recording Secretary*.

VETERINARY MEDICAL ASSOCIATION OF NEW YORK CITY.

The March meeting of this association was held in the lecture room of the New York-American Veterinary College, 141 West Fifty-fourth street, New York City, on the evening of March 4, with the President, Dr. Grenside, in the chair.

There were 38 members and visitors present. The minutes of the previous meeting were read and approved.

Dr. H. D. Gill, of New York City, addressed the association on the subject of the "Disposal of Glandered Horses." He explained the reason for bringing this subject before the meeting was that recently veterinarians and others had been subjected to arrest and fined for leading glandered subjects through the streets, while they were actually conveying such animals to the dead-dock to be destroyed. He believed that the Board of Health ordinance which provides for the destruction of glandered animals on the premises or in the streets, where they are generally allowed to remain for hours or even a day or more, surrounded by a morbid crowd, was a prolific means of deseminatation of the disease not only to other susceptible animals but to man.

Dr. Gill contended that the danger from leading glandered horses to the dead-dock was far less than the killing of the animals in different parts of the cities as is now done. The subject was freely discussed by many of the members, all of whom indorsed Dr. Gill's stand in the matter. Dr. Ackerman suggested a slaughter house for glandered horses, the same to be under the supervision of the Board of Health. The glandered subjects to be conveyed to this place in closed ambulances. This suggestion was indorsed by many present.

It was regularly moved and seconded that the President appoint a committee to draw up suitable resolutions on the disposal of glandered horses, which this association could present to the Board of Health as a recommendation. Carried.

The President appointed Doctors Gill, Ackerman and Mangan to act on this Committee.

Dr. D. J. Mangan, of New York City, read a very interesting case report on "Rabies in a Horse." He detailed very carefully all the symptoms presented during his observation of the case, which extended over a period of about eight days. Doctors Patrick Burns and W. Reid Blair were called in consultation, both of whom agreed that Dr. Mangan's diagnosis was a correct one. Upon the death of the animal, the head was taken to the laboratory of the Board of Health where a microscopic examination demonstrated the presence of the Negri bodies in great abundance. The sub-dural inoculation of guinea pigs also gave positive results. This report will be published in the AMERICAN VETERINARY REVIEW.

of
lap
ser

Am
atic
M.
cati

and
illeg
this
agre
the
conv
the
this
Hazi
New

It
refer
Carri

It
comm
the su

On
point
of our
Acke

Th

MINN

Min
evidenc
Live St
VET
erinary

Dr. C. N. Darke presented a case report of a peculiar case of Azoturia, which was of special interest on account of the lapse of time before the characteristic symptoms were presented.

The Secretary read a letter from Secretary Lyman of the American Veterinary Medical Association, inviting this association to appoint a delegate to the annual meeting of the A. V. M. A., to be held at Philadelphia next September. Communication laid on the table until the June meeting.

Dr. Hazle, of Pleasantville, N. Y., addressed the meeting, and asked co-operation of this society in the prosecution of illegal practitioners. He explained his personal work along this line and stated that the District Attorney had already agreed to assign one of his assistants to prosecute the cases if the evidence gathered was sufficient to reasonably expect a conviction. After a discussion of this matter by a number of the members, it seemed to be the consensus of opinion that this association should give moral and financial support to Dr. Hazle in his efforts to prosecute the illegal veterinarians in New York City.

It was regularly moved and seconded that this matter be referred to the Prosecuting Committee, with power to act. Carried.

It was regularly moved and seconded that this society commend Dr. Hazle for his work and that he be assured of the support of this association in every way. Carried.

On motion duly carried, the President was instructed to appoint a committee to draw suitable resolutions on the death of our late President, Dr. Roscoe R. Bell. Drs. Robertson, Ackerman and Blair were asked to act on this committee.

The meeting adjourned at 11 p. m.

W. REID BLAIR, Secretary.

MINNESOTA LIVE STOCK BREEDERS' ASSOCIATION.

Minnesota breeders appreciate veterinary co-operation, as is evidenced by the subjoined resolution recently adopted by the Live Stock Breeders' Association of that state:

VETERINARY CO-OPERATION.—WHEREAS, The best veterinary colleges are now giving considerable live stock instruc-

tion in animal husbandry, live stock judging, feeding, breeding, etc., in their veterinary courses, and even erecting live stock pavilions for instruction work of this kind, and

WHEREAS, Veterinary organizations are urging their members to get in closer and more helpful relations with the live stock interests, particularly in the matter of control work with infectious and preventable disease, and in work for the improvement of live stock, therefore be it

Resolved, That we express our appreciation of this movement in the veterinary profession and gladly welcome this assistance in our efforts to build up live stock interests.

ENDORSEMENT OF THE WORK OF THE LIVE STOCK SANITARY BOARD.—WHEREAS, The protection of the health of our live stock is a matter of the greatest importance on account of the intimate relation existing between animal and human wealth and because of the great financial losses which may be prevented by wise sanitary measures, and,

WHEREAS, We believe that the Minnesota State Live Stock Sanitary Board has been doing very efficient, economically managed and valuable work to this end, therefore be it

Resolved, That we hereby express our appreciation of the work of this board in protecting the health of our families and the values of our live stock. Be it further

Resolved, That we especially commend the policy of education and helpful co-operation which has been carried out by this board in connection with prevailing infectious diseases of domestic animals. Be it further

Resolved, That we, as members of the Live Stock Breeders' Association, hereby promise our personal support and co-operation in this work and all reasonable assistance to the board when it comes before the next Legislature asking for needed financial support. Be it further

Resolved, That, as an association, we call upon our Legislature, at its next meeting, to support this work as liberally as available funds will permit.

APPRECIATION OF FEDERAL CONTROL WORK.—WHEREAS, Our federal Congress has appropriated liberally for work under the Bureau of Animal Industry for the eradication of Texas Fever from the cattle, and for control work with sheep scab and mange among the flocks and herds of the West and Northwest, and has appropriated also for investigation and control work with other infectious diseases of live stock, therefore be it

Resolved, That we hereby express our appreciation of this generous and wise appropriation for protecting the health of our live stock and the prosperity of live stock interests.

APPROVAL OF THE WORK OF THE STALLION BOARD.—
WHEREAS, The Minnesota Stallion Registration Board has nearly completed its first year of service, and

WHEREAS, We believe this work has been wisely and well done and a creditable beginning made in this important work, therefore be it

Resolved, That we express our confidence in this board and appreciation of its great usefulness, and be it further

Resolved, That we promise our individual support and co-operation with this board in its endeavors to secure better horse breeding stock for our State.

VETERINARY ASSOCIATION OF THE DISTRICT OF COLUMBIA.

The regular monthly meeting of this association was held on the evening of February 26, 1908, at Oppenheimer's Hall, 514 Ninth street, N. W., Washington, D. C., with the President, Dr. John Lockwood, in the Chair. There was the usual good attendance. Drs. B. T. Woodward, C. C. Walker, and R. Humphries attended as visitors.

The subject of the treatment of center crack was brought up by Dr. Hulbert Young, who related the characteristics of a case occurring in his practice, and his method of treatment. The matter was discussed at length by Drs. J. P. Turner, C. E. Dornheim, and John Lockwood, and many interesting points were brought out.

F. M. ASHBAUGH, *Secretary*.

MARYLAND STATE VETERINARY MEDICAL SOCIETY.

The regular monthly meeting of the above society took place at Baltimore, Md., February 20, 1908. Unfinished business was transacted.

Drs. Dougherty and Jarman suggested that young material be placed at the helm. The election of officers for the ensuing year resulted as follows:

President—Dr. H. A. Meisner.

Vice-President—Dr. F. M. Keller.

Secretary and Treasurer—Dr. H. H. Counselman.

Board of Censors—Drs. Wm. T. Dougherty, G. Gill, G. A. Jarman, F. H. Mackie, H. Bye.

Several interesting papers were read by Dr. H. A. Meisner, the newly-elected president, on the psychology and brain development of the horse, concerning the making of good trotters, pacers and runners. The above papers were discussed by Dr. Dougherty and others.

The Veterinary Medical Society heretofore has been one of negligent character as to meetings and attendance until a recent banquet held in Baltimore, at which a sumptuous repast was served. This association had not held a meeting for two years. The society was on the verge of disbandment until our veteran promoters and organizer made a suggestion and took the helm, and to him undoubtedly our present success is largely due. The society is now at work on legislative business and trying hard to have the Legislature pass a law regulating tuberculosis in cattle, and frame up a new law regulating the practice of veterinary medicine. We are in hope that the society will keep up the good work and that the new material will work hand in hand to prove the society one of the best ever.

H. H. COUNSELMAN, *Secretary.*

"I cannot speak too highly of your interesting and instructive publication."—(*H. S. Wende, V. S., Tonawanda, N. Y.*)

"I find each journal containing reports of a great many interesting as well as instructive cases."—(*R. G. Flowers, Veterinarian, Fort Worth, Texas.*)

WHAT DID HE GIVE?—The druggist had just filled a veterinarian's prescription.

"I'd like a copy of that prescription," said the customer.

"Guess you'll have to get it from the doctor," replied the druggist; "I could never read his writing."

NEWS AND ITEMS.

THE annual banquet of the Veterinary Alumni, N. Y. U., took place on the evening of March 31st.

THE next civil service examination for Veterinary Inspectors, B. A. I., will occur April 15, 1908.

FORTY-THREE thousand cans of milk, each can containing forty gallons, comes into New York every day.

CAREFUL estimates of the number of horses in New York place the total at something like 100,000 head.

VETERINARIAN C. A. LOXTON has been appointed Assistant Government Veterinary Surgeon under Chief Veterinarian Desmond in South Australia.

R. T. WHITTLESEY, D. V. S., one of the oldest practitioners of Los Angeles, who has been in ill health for some time, is now convalescing rapidly.

DR. GEO. H. LEE (McGill University, '92), of Boston, Mass., died February 3, 1908. Dr. Lee was veterinarian to the City of Boston and well known among horsemen the country over.

NEW regulations governing the federal meat inspection service, going into force April 1, 1908, have been promulgated by the Bureau of Animal Industry, U. S. Department of Agriculture.

THE San Francisco Veterinary College announces that the next session of that school will be extended from six months to a seven-month course, and that the succeeding sessions will be lengthened until the course is nine months each year.

PRESIDENT W. H. DALRYMPLE, A. V. M. A., was one of the speakers at a meeting of the East Baton Rouge Parish Medical Society, held at the Louisiana State University on the evening of March 28, His Excellency, Governor Blanchard, presiding.

VETERINARIAN ROBERT A. ARCHIBALD, Vice-President of the A. V. M. A., and President of the State Board of Veterinary Medical Examiners of California, has been appointed to the Chair of Bacteriology in the Oakland Medical College, Oakland, Cal.

A TOILET club for dogs has been opened in one of London's most fashionable streets, where they may be bathed and have their coats trimmed in the most approved style. There, too, they may be manicured, and any grumbling molar will be extracted.

SECRETARY LYMAN, A. V. M. A., RETURNS TO HARTFORD.—Dr. R. P. Lyman, a member of the teaching force of the Kansas City Veterinary College during the session just closed, has returned to Hartford, Conn., where all communications for him should now be addressed.

COW *vs.* MILKMAN.—A Philadelphia lawyer maintains an admirable stock farm on the outskirts of the Quaker City. One day last summer some poor children were permitted to go over this farm, and when their inspection was done each of them was given a glass of milk. The milk came from a \$2,500 cow.

"How do you like it, boys?" asked an attendant, when the little fellows had drained their glasses.

"Fine! Fine!" said one youngster, with a grin of approval. Then, after a pause, he added: "I wisht our milkman kept a cow."—(*Harper's Monthly.*)

CHICAGO TO HAVE A \$250,000 VETERINARY COLLEGE.—Plans are now completed for the erection in Chicago of the largest and best-equipped veterinary college and hospital in America to be under the control of the state of Illinois, on a site which has been given by the Union Stockyards and Transit Company under a ninety-nine year lease at a nominal rental.

The probable cost of the buildings is \$250,000, which amount has already been obtained by private subscriptions, thus securing the full realization of the scheme. The Legislature of Illinois has appropriated \$35,000 towards the maintenance of the hospital.

The college is to be affiliated with the University of Illinois. Millions of animals are received at the stock yards every year, and it is claimed that the new college will be unequalled in its ability to secure material for clinical work. The promoters of the project say that nothing will be left undone to make this the greatest seat of veterinary learning in the entire world. Credit for the fruition of the idea is given to Dr. O. E. Dyson, consulting veterinarian and former inspector in charge of government inspection at the stock yards, and Arthur G. Leonard, vice-president and general manager of the stock yards company.

Am
Vet
Cor
New
Sch
Pas
Tex
Mas
Mai
Cent
Mich
Alun
Illino
Wisc
Illino
Vet.
North
Ontar
V. M.
Ohio
Weste
Missou
Genese
Iowa V
Minnes
Pennsy
Keysto
Colorad
Missour
Rhode I
North D
Californ
Southern
State
South D
Nebrask
Kansas S
Ass'n M
caise "
Province
Kentucky
Washingt
Indiana V
Louisiana
Twin City
Hamilton
Mississipp
Georgia S
Soc. Vet.
Virginia S
Oklahoma
Veterinary
Vet. Ass'n
B. A. I. V.
Arkansas
York Co.
Philippine
Montana S
Veterinary
Chicago V
Maryland

VETERINARY MEDICAL ASSOCIATION MEETINGS.

VETERINARY MEDICAL ASSOCIATION MEETINGS.

In the accompanying table the data given is reported by many Secretaries as being of great value to their Associations, and it is to be regretted that some neglect to inform us of the dates and places of their meetings.

Secretaries are earnestly requested to see that their organizations are properly included in the following list :

Name of Organization.	Date of Next Meeting.	Place of Meeting.	Name and Address Secretary.
American V. M. Ass'n.....	Sept. 8, 9, 10 & 11.	Philadelphia..	R. P. Lyman, Hartford, Ct.
Vet. Med. Ass'n of N. J.....	July 9, 10, 1908..	Newark	W. H. Lowe, Paterson.
Connecticut V. M. Ass'n.....	.....	Hartford	B. K. Dow, Willimantic.
New York S. V. M. Soc'y.....	Sept., 1908.....	Utica.....	M. Hamilton, Delhi.
Schuylkill Valley V. M. A.....	June 17.....	Reading.....	W. G. Huyett, Wernersville.
Passaic Co. V. M. Ass'n.....	Call of Chair...	Paterson, N. J.	H. K. Berry, Paterson, N. J.
Texas V. M. Ass'n.....	Call Exec. Com.	.....	E. L. Lewis, Waxahachie.
Massachusetts Vet. Ass'n.....	Monthly.....	Boston.....	Wm. T. White, Newtonville
Maine Vet. Med. Ass'n.....	April 8, 1908....	Waterville....	A. Joly, Waterville.
Central Canada V. Ass'n.....	.....	Ottawa.....	A. E. James, Ottawa.
Michigan State V. M. Ass'n.....	.....	Lansing.....	Judson Black, Richmond.
Alumni Ass'n, N. Y.-A. V. C.....	April, 1908.....	141 W. 54th St.	T. F. Krey, N. Y. City.
Illinois State V. M. Ass'n.....	July, 15, 1908....	Galesburg....	N. I. Stringer, Paxton.
Wisconsin Soc. Vet. Grad.....	.....	.....	S. Beattie, Madison.
Illinois V. M. and Surg. A.....	.....	Decatur.....	C. M. Walton, Rantoul
Vet. Ass'n of Manitoba.....	Not stated.....	Winnipeg.....	F. Torrance, Winnipeg.
North Carolina V. M. Ass'n.....	July 2-3, 1908..	Raleigh.....	Adam Fisher, Charlotte.
Ontario Vet. Ass'n.....	.....	.....	C. H. Sweetapple, Toronto.
V. M. Ass'n, New York City.....	1st Wed. ea. mo.	141 W. 54th St.	W. Reid Blair, N. Y. City.
Ohio State V. M. Ass'n.....	.....	Columbus.....	Sidney D. Myers, Wilmington
Western Penn. V. M. Ass'n.....	1st Wed. ea. mo.	Pittsburgh....	F. Weitzell, Allegheny.
Missouri Vet. Med. Ass'n.....	.....	.....	F. F. Brown, Kansas City.
Genesee Valley V. M. Ass'n.....	.....	Rochester....	J. H. Taylor, Henrietta, N.Y.
Iowa Veterinary Ass'n.....	.....	.....	H. C. Simpson, Denison, Ia.
Minnesota State V. M. Ass'n.....	July, 8-9, 1908..	Duluth.....	C. A. Mack, Stillwater.
Pennsylvania State V. M. A.....	.....	Philadelphia..	F. H. Schneider, Philadelphia.
Keystone V. M. Ass'n.....	Monthly.....	Philadelphia..	A. W. Ormiston, 102 Herman St., Germantown, Pa.
Colorado State V. M. Ass'n.....	June, 1908.....	Denver.....	M. J. Woodliffe, Denver.
Missouri Valley V. Ass'n.....	.....	Kansas City..	B. F. Kaupp, Kansas City.
Rhode Island V. M. Ass'n.....	Jan. and June..	Providence....	T. E. Robinson, Westerly, R.I.
North Dakota V. M. Ass'n.....	.....	.....	C. H. Martin, Valley City.
California State V. M. Ass'n.....	Mch. Je. Sep. Dec	San Francisco	C. M. Haring, U. C., Berkeley.
Southern Auxiliary of California State V. M. Ass'n.....	Jan. Apl. Jy. Oct.	Los Angeles..	J. A. Edmonds, Los Angeles.
South Dakota V. M. A.....	.....	.....	E. L. Moore, Brookings.
Nebraska V. M. Ass'n.....	.....	.....	Hans Jensen, Weeping Water.
Kansas State V. M. Ass'n.....	.....	Manhattan...	Hugh S. Maxwell, Salina.
Ass'n Médéciale Veterinaire Française "Laval"	1st and 3d Thur. of each month	Lec. Room, Laval Un'y, Mon.	J. P. A. Houde, Montreal.
Province of Quebec V. M. A.....	.....	Mon. and Que.	Gustave Boyer, Rigand, P. Q.
Kentucky V. M. Ass'n.....	.....	Not decided...	D. A. Piatt, Lexington.
Washington State Col. V. M. A.....	Monthly.....	Pullman, Wa.	Wm. D. Mason, Pullman.
Indiana Veterinary Association...	An'l, Jan., '09...	Indianapolis..	E. M. Bronson, Indianapolis.
Louisiana State V. M. Ass'n.....	.....	.....	E. P. Flower, Baton Rouge.
Twin City V. M. Ass'n.....	2d Thu. ea. mo.	St. P.-Minneap	S. H. Ward, St. Paul, Minn.
Hamilton Co. (Ohio) V. M. A.....	.....	.....	Louis P. Cook, Cincinnati.
Mississippi State V. M. Ass'n.....	.....	Auburn, Ala..	J. C. Robert, Agricultural Col.
Georgia State V. M. A.....	.....	.....	C. L. Willoughby, Experiment
Soc. Vet. Alumni Univ. Penn.....	June, 1908.....	Philadelphia..	B. T. Woodward, Wash'n, D.C.
Virginia State V. M. Ass'n.....	July 17, 1908...	Norfolk.....	W. G. Chrisman, Charlo'sv'le
Oklahoma V. M. Ass'n.....	.....	.....	W. H. Martin, El Reno.
Veterinary Practitioners' Club...	Monthly.....	.....	A. F. Mount, Jersey City.
Vet. Ass'n Dist. of Columbia.....	4th Wed. ea. mo.	514—9th St., N. W.	F. M. Ashbaugh, Wash., D. C.
B. A. I. Vet. In. A., Chicago.....	2d Fri. ea. mo...	Chicago.....	J. Madsen, Chicago, Ill.
Arkansas Veterinary Society.....	.....	.....	B. H. Merchant, Little Rock.
York Co. (Pa.) V. M. A.....	.....	York, Pa.....	E. S. Bausticker, York, Pa.
Philippine V. M. A.....	.....	.....	R. H. McMullen, Manila.
Montana State V. M. A.....	Oct., 1908.....	Helena.....	.....
Veterinary Ass'n of Alberta.....	.....	.....	C. H. H. Sweetapple, For. Saskatchewan, Alta., Can.
Chicago Veterinary Society.....	2d Tues. ea. mo.	Chicago.....	J. M. Parks, Chicago.
Maryland State Vet. Society.....	.....	Baltimore....	H. H. Counselman, Sec'y.

PUBLISHERS' DEPARTMENT.

Subscription price, \$3 per annum, invariably in advance; Canadian subscriptions, \$3.25; foreign countries, \$3.60; students while attending college, \$2; Students in Canada, \$2.25; single copies, 25 cents.

Rejected manuscripts will not be returned unless postage is forwarded.

Subscribers are earnestly requested to notify the Business Manager immediately upon changing their address. Make all checks or P. O. orders payable to American Veterinary Review.

A REPLY TO MANY LETTERS.

THE publishers are very much encouraged by the prompt renewals of subscriptions to Volume XXXIII., and the many assurances of appreciation of their efforts to give their readers the best veterinary periodical published. Kind words of regret and sympathy at the loss of Dr. Bell have so universally formed a part of these letters that it has made us feel a desire to reply to each one individually; but their immense number makes it impossible, so we express our gratefulness to you all here.

IMPROVEMENTS IN AN OPERATING TABLE.

WE are advised by THE BRADWOOD MANUFACTURING COMPANY of many improvements in the HUMANE EQUINE OPERATING TABLE over the table built by them two years ago, which will be interesting to our readers.

Some of the features of the IMPROVED TABLE, which has many advantages over the previous one, are that it can be used for a HUMANE VETERINARY CHAIR, in accident cases, such as nail punctures, bruised and lacerated knees, etc., the slings of the table holding the animal far better than the regular sling in a stall. Besides, by having access to all sides of the animal, the wounds may be dressed as frequently as required without disturbing the patient.

The table is also arranged so that the hooks which hold the sling can be hooked onto the sling and lift the animal out of the veterinary ambulance, or give it immediate support.

So that, entirely outside of its usefulness in surgical operations, the revolving table used as a veterinary chair, to support injured animals in the early treatment of their wounds, adds materially to the veterinarian's facilities to cope with the conditions cited; it is always there when needed for operations.

Two points are thus gained in the IMPROVED TABLE. Its larger field of usefulness increases the returns for the money invested, and it is not occupying idle space, while it is accommodating a patient.

y
e

-
-
d
e
l,
ne

an
u-

he
he
li-
ed

of
cu-

R

R

cop
nes

de

Em